

## TANGIBLE RESULT #2

# Use Resources Wisely



MDOT receives resources from our customers and they expect products and services in return. To better serve our customers, MDOT must maximize the value of every dollar we spend.

### RESULT DRIVER:

Corey Stottlemeyer

*The Secretary's Office (TSO)*

## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Jacob Dunkle  
Maryland Transit Administration (MTA)

## PURPOSE OF MEASURE:

To track the efficiency of capital spending and to report capital project delays.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Track capital project spending versus the CTP programmed funds.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.1

### Percent Capital Dollars Spent as Programmed

*"What we need to do is paint a vision for customers, promise them deliverables, and go hit at it." — Sanjay Kumar*

The purpose of this measure is to show MDOT's customers that the Agency is delivering on the capital projects and funding programmed projects in the annual Consolidated Transportation Program (CTP). MDOT evaluates this measure by tracking capital funding expenditure rates and monitoring the reasons why expenditure levels are falling short or exceeding CTP programmed amounts.

At the close of Q4 FY2018, MDOT's capital program spending rate was at 92 percent of CTP forecasted funds expended, which is 1 percent higher than this time last year.

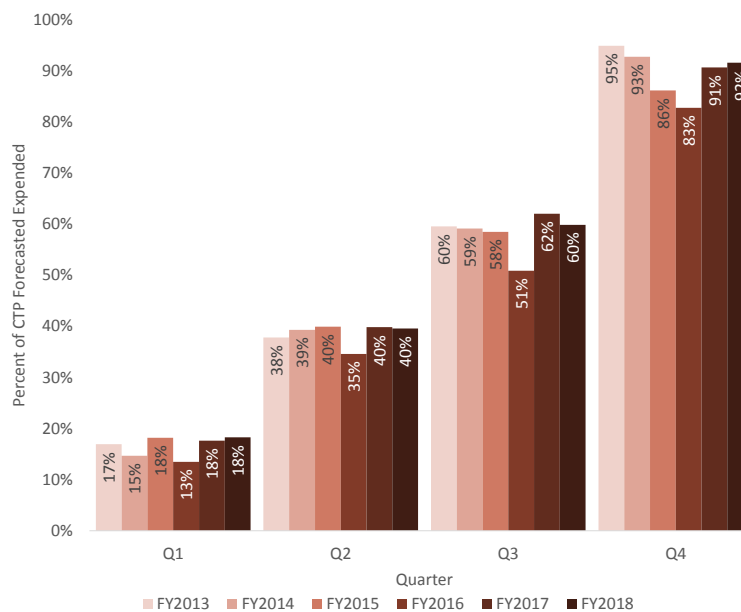


## PERFORMANCE MEASURE 2.1

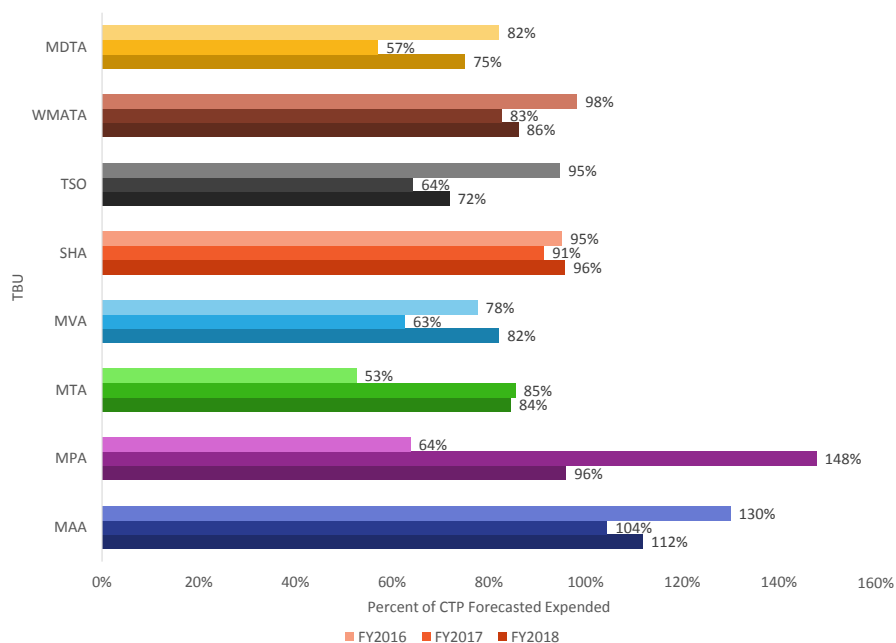
### Percent Capital Dollars Spent as Programmed & Project Delay Analysis and Reasoning

Listed below is a breakdown of the FY18 expenditure rate for each individual TBU, as compared to the last two fiscal years.

**Chart 2.1.1: 6-Year Expenditure Rate Analysis (Federal & State) FY2013-FY2018**



**Chart 2.1.2: 3-Year Expenditure Rate by TBU at Q4 Mark (State/Federal/Toll) FY2016-FY2018**





## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Tony Moore  
Maryland Port Administration (MPA)

## PURPOSE OF MEASURE:

To track other sources of dollars utilized to fund capital projects as an indicator of MDOT's success at leveraging its finite resources.

## FREQUENCY:

Annually

## DATA COLLECTION METHODOLOGY:

This measure tracks county/local contributions, private contributions, and federal discretionary funding received each year for projects.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.2

### Projects Leveraging Other Funding Sources

*"When we leverage, we aggregate and organize existing resources to achieve success." — Richie Norton*

The purpose of this measure is to track and highlight the success at leveraging Transportation Trust Fund (TTF) dollars with federal, local, and private dollars.

MDOT leveraged \$122M in other funding in FY2018. Most of this funding was leveraged by MTA through county contributions toward the construction of Purple Line projects; by SHA through private contributions, by TSO through the private contributions for the development of the MAGLEV project; and discretionary funds received by the MTA.

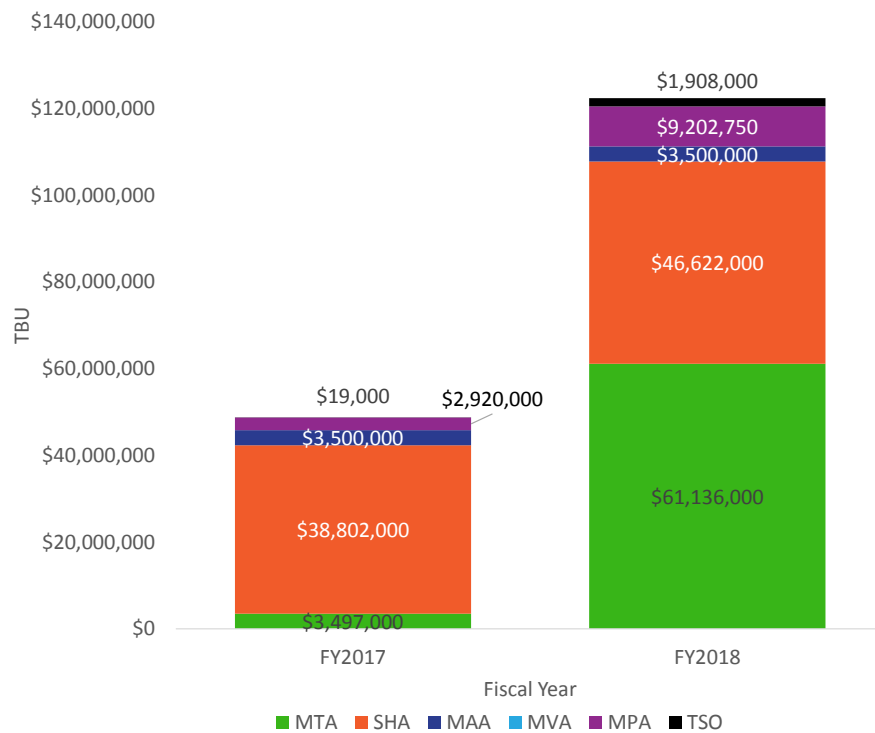
During FY2018 \$68M of the leveraged funds were from county/local contributions. \$49M in funds were from private contributions.

In FY2017 a total of \$49M in leveraged contributions were received. The variance in FY2017 and FY2018 leveraged funds is due to increased construction for the MAGLEV project; additional SHA private contribution projects activity; increases in Purple Line construction and the receipt of a federal discretionary grant at the MPA and airport improvement grants at MAA.

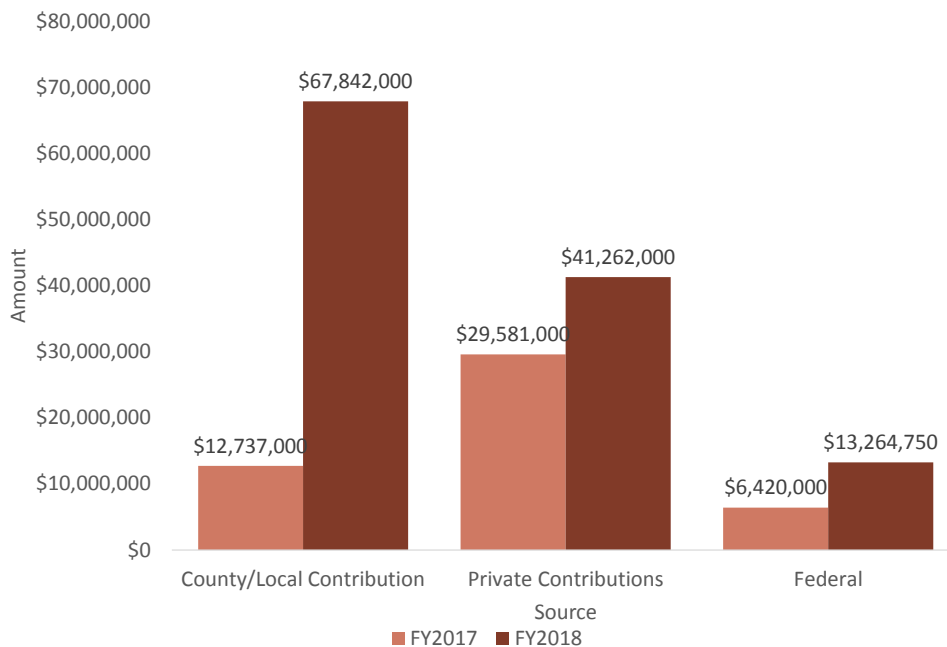
## PERFORMANCE MEASURE 2.2

### Projects Leveraging Other Funding Sources

**Chart 2.2.1: Other Funding Leveraged by TBU FY2017-FY2018**



**Chart 2.2.2: Amount of Other Funding Leveraged by Sources FY2017-FY2018**



## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer

The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Ellery Loomis

Maryland Vehicle Administration  
(MVA)

## PURPOSE OF MEASURE:

To track the commitment of our employees in furthering MDOT's reputation, mission and interests by identifying key motivators and obstacles in the workplace.

## FREQUENCY:

Annually

## DATA COLLECTION METHODOLOGY:

MDOT employee feedback survey administered to all employees.

## NATIONAL BENCHMARK:

\*GALLUP 2015 national engagement percentages:

32 percent engaged employees

50.8 percent not engaged

17.2 percent actively disengaged

## PERFORMANCE MEASURE 2.3

### Employee Engagement

*"There are only three measurements that tell you nearly everything you need to know about your organization's overall performance: employee engagement, customer satisfaction, and cash flow." — Jack Welch*

Engagement accounts for the emotional commitment an employee has for MDOT and the amount of discretionary effort the employee expends on behalf of the Department. Engaged employees go beyond what they "have to do" to what they "want to do" for MDOT and its customers.

MDOT completed its first ever department-wide Employee Feedback Survey that eliminated redundant efforts and minimized expense by combining talent and resources, ensured a systematic and consistent approach to employee engagement across all TBUs, and accurately gauged the workforce climate to develop and prioritize new business strategies. The results of the survey were positive, but also pointed to areas of improvement on which to focus strategies.

## PERFORMANCE MEASURE 2.3 Employee Engagement

Chart 2.3.1: Responses to “Would You Consider MDOT to Have a Positive Workplace Environment?” CY2017

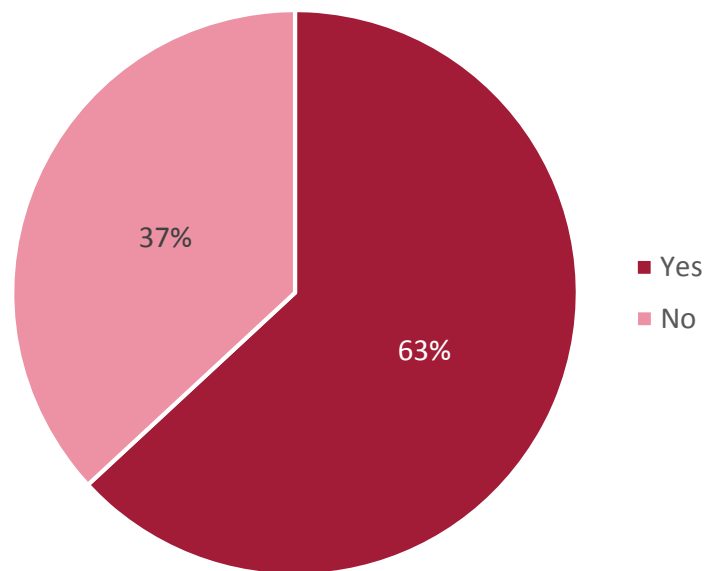
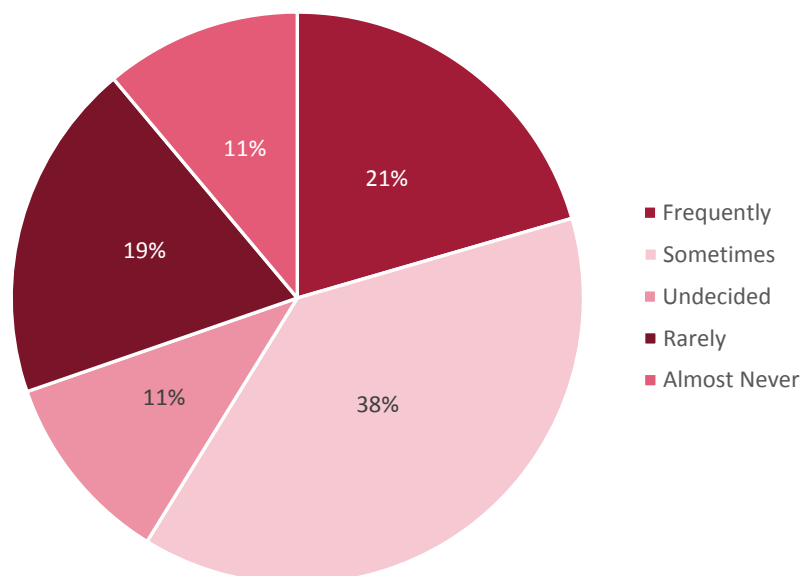


Chart 2.3.2: Responses to “How Often Do You Feel Valued at Work?” CY2017



## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Bret A. Dousharm  
Maryland Transportation Authority  
(MDTA) Police

## PURPOSE OF MEASURE:

To identify the percentage of employees who leave MDOT and analyze trends in voluntary and involuntary separations.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Quarterly reports of employee separations are provided by TSO HRIS Unit. These reports show the number of separations during a given period of time for each TBU broken down by all available separation codes (i.e. reasons).

## NATIONAL BENCHMARK:

U.S. Department of Labor  
(DOL) Bureau of Labor Statistics  
for U.S. state and local  
governments.

## PERFORMANCE MEASURE 2.4

### Employee Turnover Rate

*"Having to re-recruit, rehire, and retrain, and wait for a new employee to get up to speed is devastating in terms of cost." – Patrick Lencioni*

Annual employee turnover rate is the ratio of total separations, both voluntary and involuntary, compared to the average number of employees during the given timeframe, expressed as a percentage. The Human Resource Information System (HRIS) Unit in the Human Resources Division of the TSO provided the total number of employees and total number of separations for each TBU on a quarterly basis. The national benchmark was determined by utilizing the U.S. Bureau of Labor Statistics' Job Opening and Labor Turnover Survey (JOLTS) data for U.S. state and local governments (excluding education, seasonally adjusted) total employee separations.

Chart 2.4.1 compares the turnover rate of each TBU for the Q3 of CY2017 and CY2018.

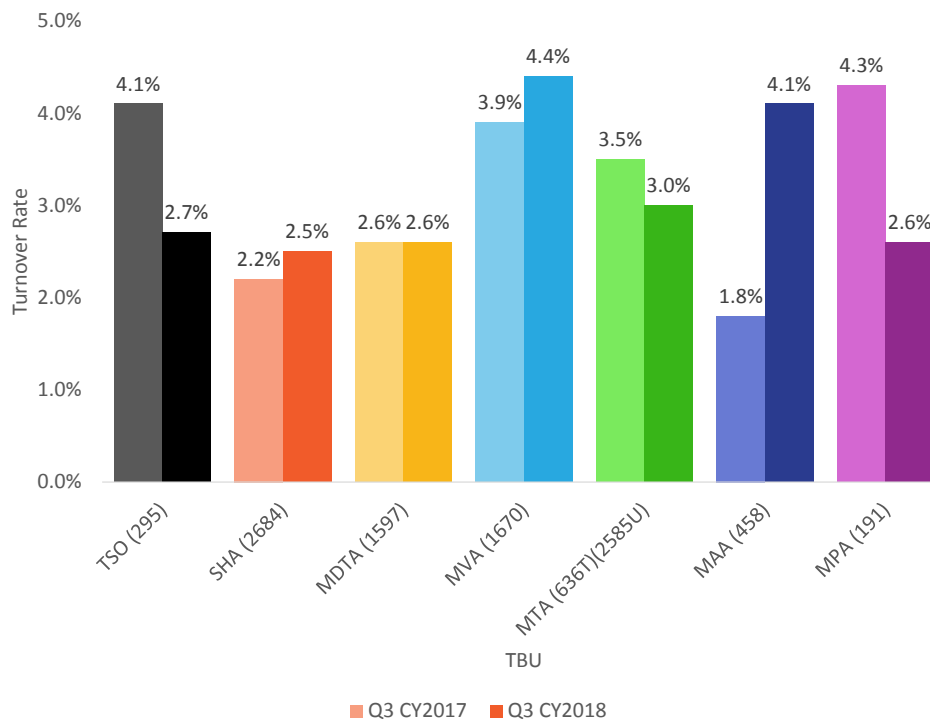
Chart 2.4.2 compares the MDOT total turnover rate to the national average for state and local governments for the Q3 of CY2017 and CY2018 of which MDOT is over 0.9 percent above the national average.

One notable element that continues to be important in analyzing MDOT turnover is the employee separations that occur within one year from the date of hire. The following chart illustrates the number of newly hired employees that have separated from MDOT in comparison to all other separations occurring in Q3 of CY2018. This data reflects that during Q3 approximately 26.7 percent of all employee separations during this timeframe occurred within the first year of hire. This is a 1.5 percent increase from Q2 of CY2018.

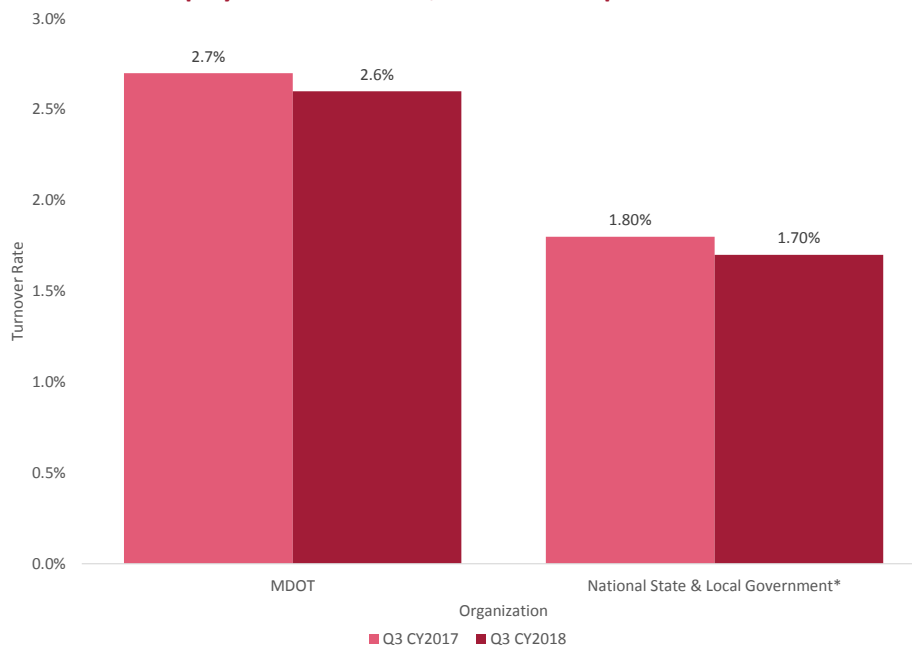


## PERFORMANCE MEASURE 2.4 Employee Turnover Rate

**Chart 2.4.1: Employee Turnover Rate by TBU (Total Employees), Seasonal Comparison of Q3 CY2017-CY2018**



**Chart 2.4.2: Employee Turnover Rate, Seasonal Comparison Q3 CY2017-CY2018**



## PERFORMANCE MEASURE 2.4 Employee Turnover Rate

Chart 2.4.3: Employee Separations Q3 CY2018

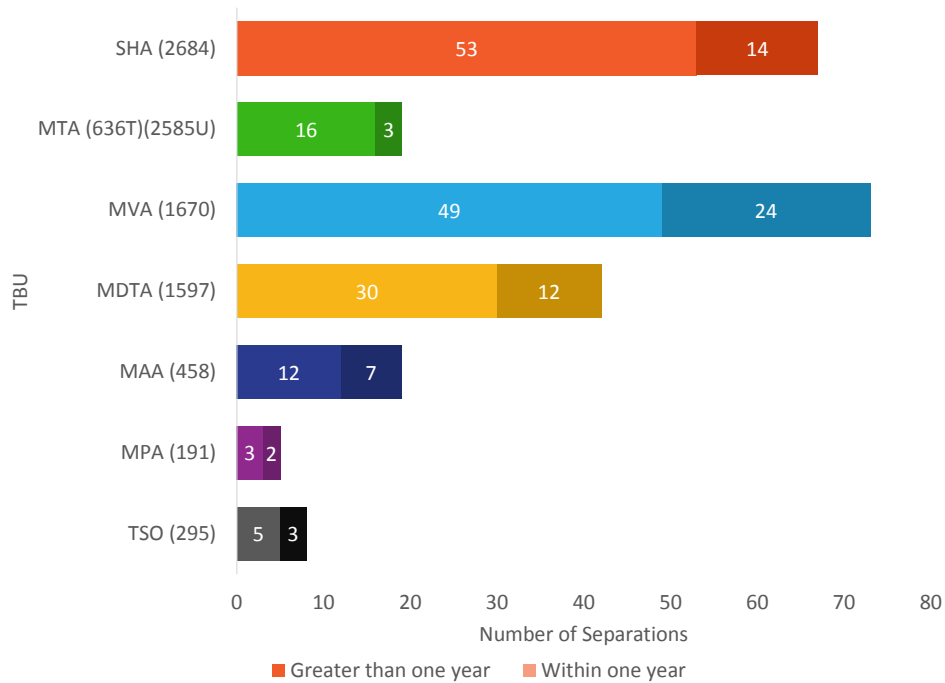
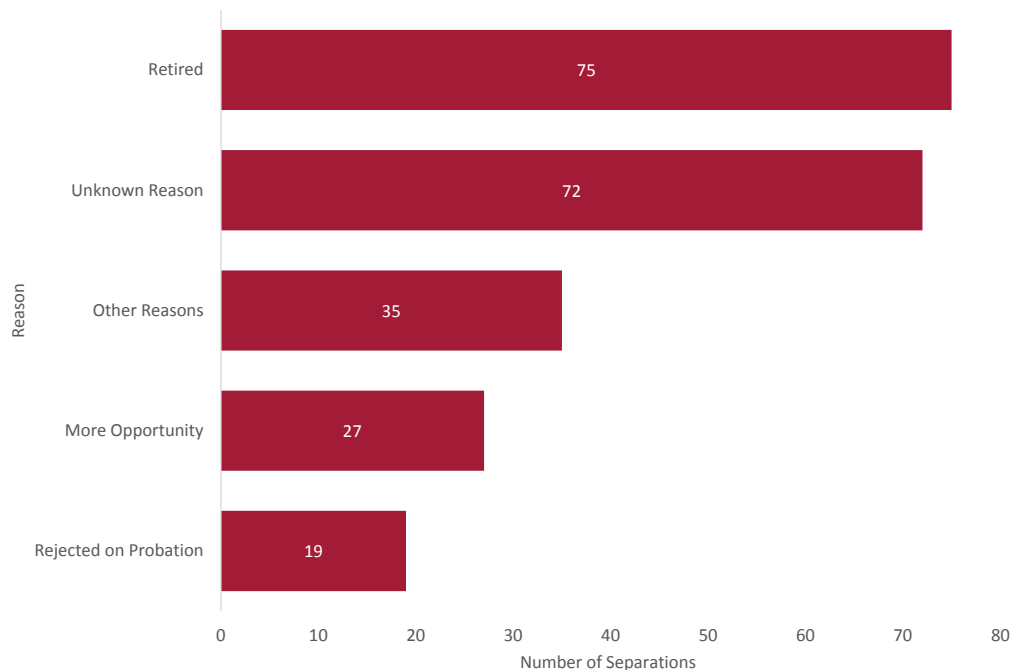


Chart 2.4.4: Top 5 Most Frequent Separation Reasons MDOT-Wide Q3 CY2018



## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Krystel Wilson  
Maryland Aviation Administration  
(MAA)

## PURPOSE OF MEASURE:

To demonstrate efficient use of available positions and identify opportunities for improvement in our recruitment and selection processes.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Quarterly report for MDOT and each TBU from TSO HRIS and spreadsheets completed by TBU Human Resource Offices.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.5

### Time to Fill Vacancies

*"You should take your time making new hires, I'll give you that -- but how much time do you really have? The people you're interviewing have lives." – Liz Ryan*

Reducing the time it takes to fill our vacant positions will increase MDOT's staffing levels, improving the ability to deliver projects on time and to rapidly address emergencies affecting the transportation system.

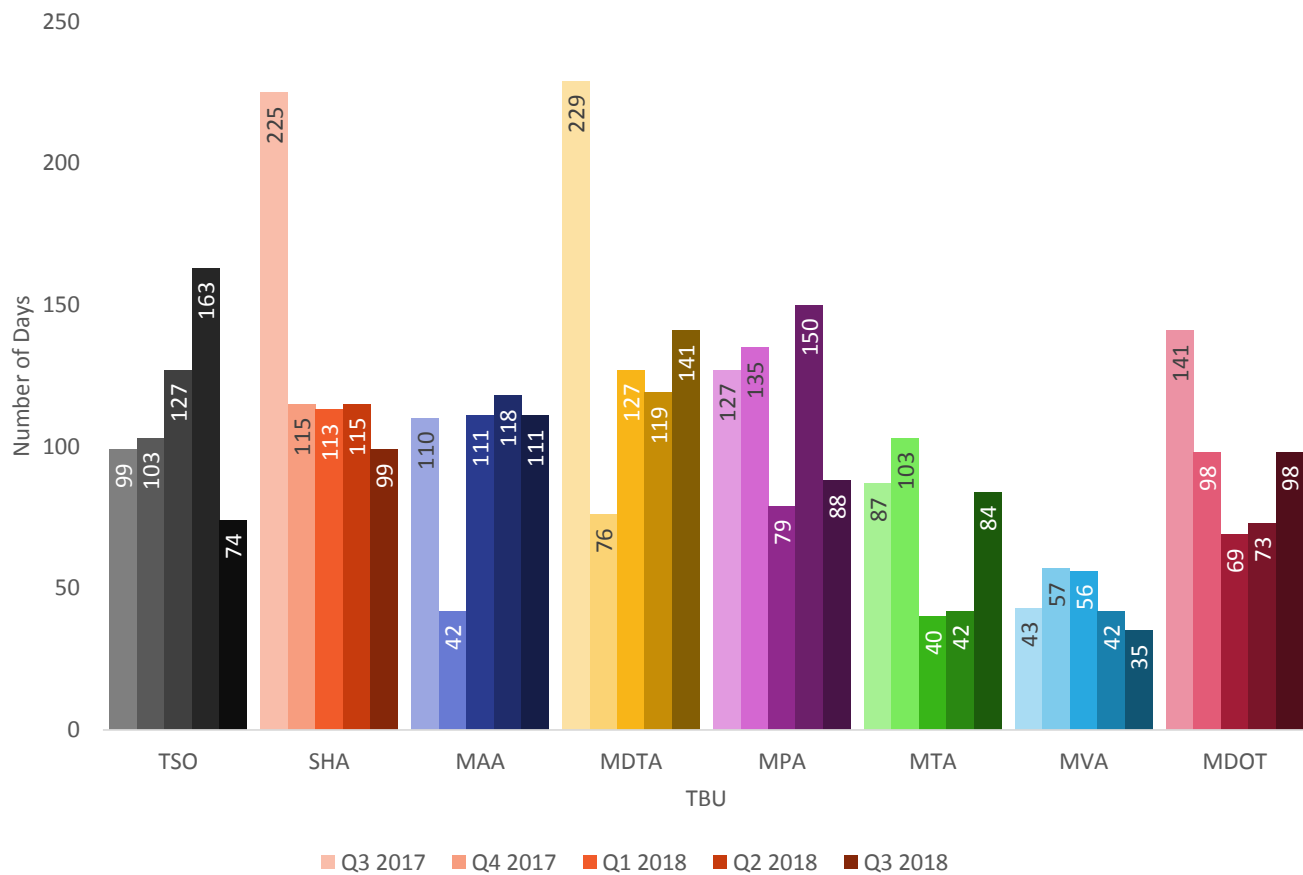
MDOT-wide the median for Q2 CY2018 was 73 days, slightly up from Q1 CY2017's median of 69 days.

Data for Q2 CY2017 and Q2 CY2018 were compared. In Q2 CY2018, 94% vacancies were filled in less than 180 days, compared to 55% vacancies filled in Q2 CY2017 in less than 180 days.

The Agile HR workgroup on recruitment processes has been meeting to map the process across all TBUs and identify ways to streamline/standardize the process and eliminate unnecessary or redundant activities. As this work progresses, it is critical that all parties remain fully engaged in the recruitment process so that we can fill vacancies quickly and with high quality candidates.

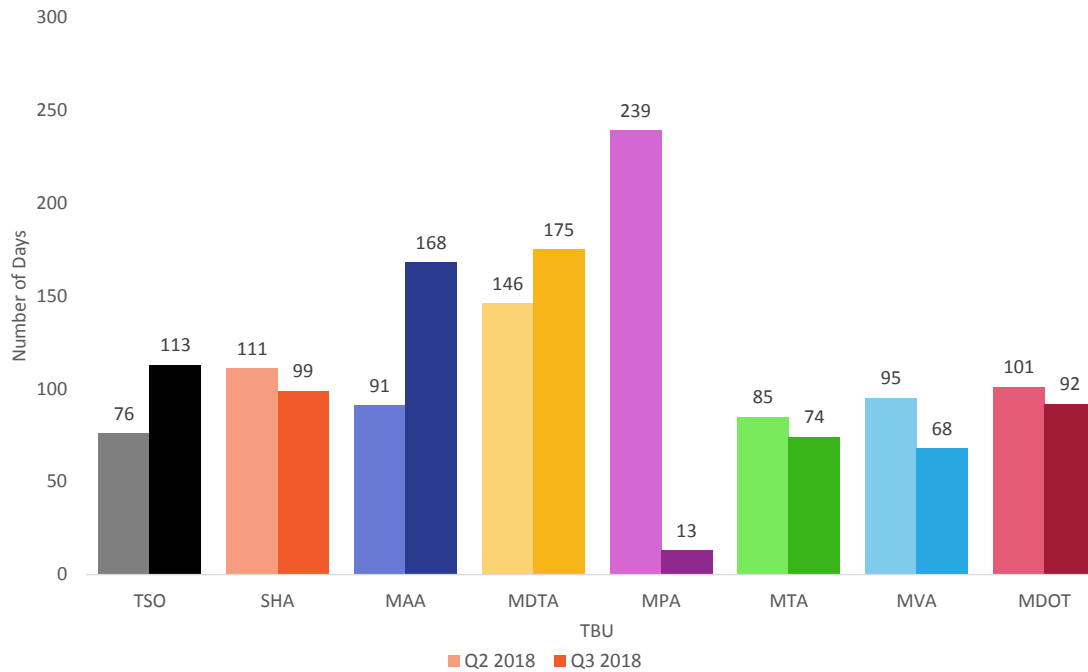
## PERFORMANCE MEASURE 2.5 Time to Fill Vacancies

Chart 2.5.1: Median Time to Fill Vacancies by TBU CY2017-CY2018

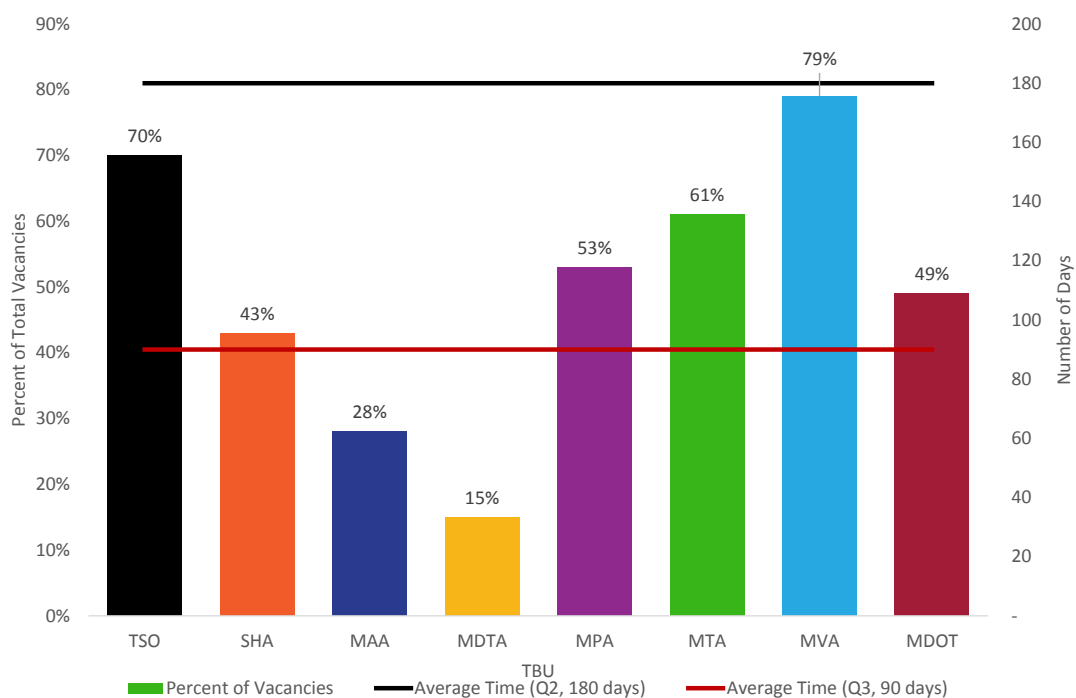


## PERFORMANCE MEASURE 2.5 Time to Fill Vacancies

**Chart 2.5.2: Median Time to Fill Executive Service Vacancies Q2-Q3 CY2018**



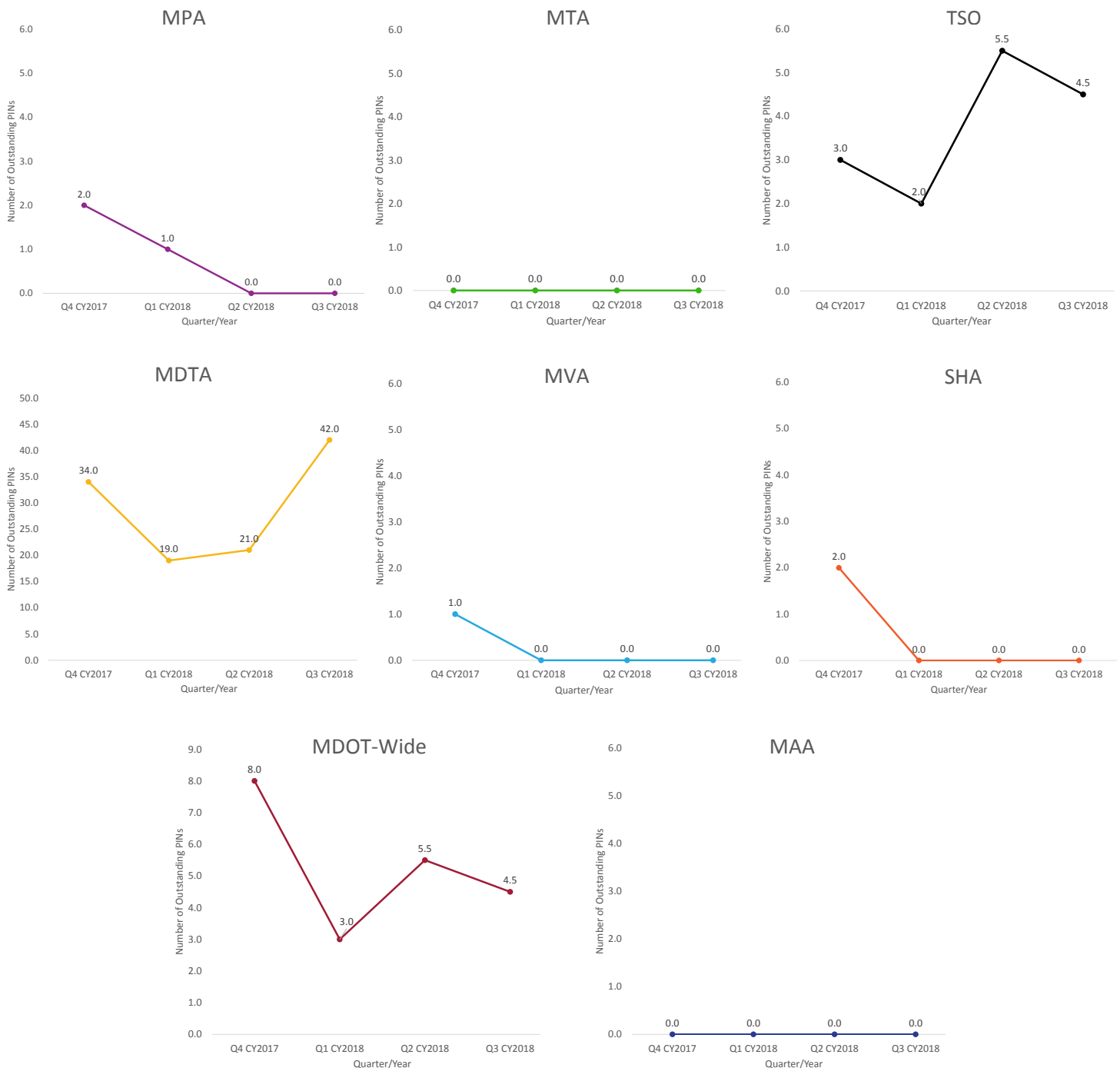
**Chart 2.5.3: Percent of Vacancies Filled in less than 90 Days Q3 CY2018**





## PERFORMANCE MEASURE 2.5 Time to Fill Vacancies

Chart 2.5.4: Outstanding PINs (6 months or older) by TBU Q4 CY2017 – Q3 CY2018



## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Dan Ruth  
State Highway Administration (SHA)

## PURPOSE OF MEASURE:

To measure how well MDOT records, safeguards, and efficiently controls fixed assets.

## FREQUENCY:

Annually (in October)

## DATA COLLECTION METHODOLOGY:

Data will be collected when the business units conduct annual fixed asset physical inventories.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.6

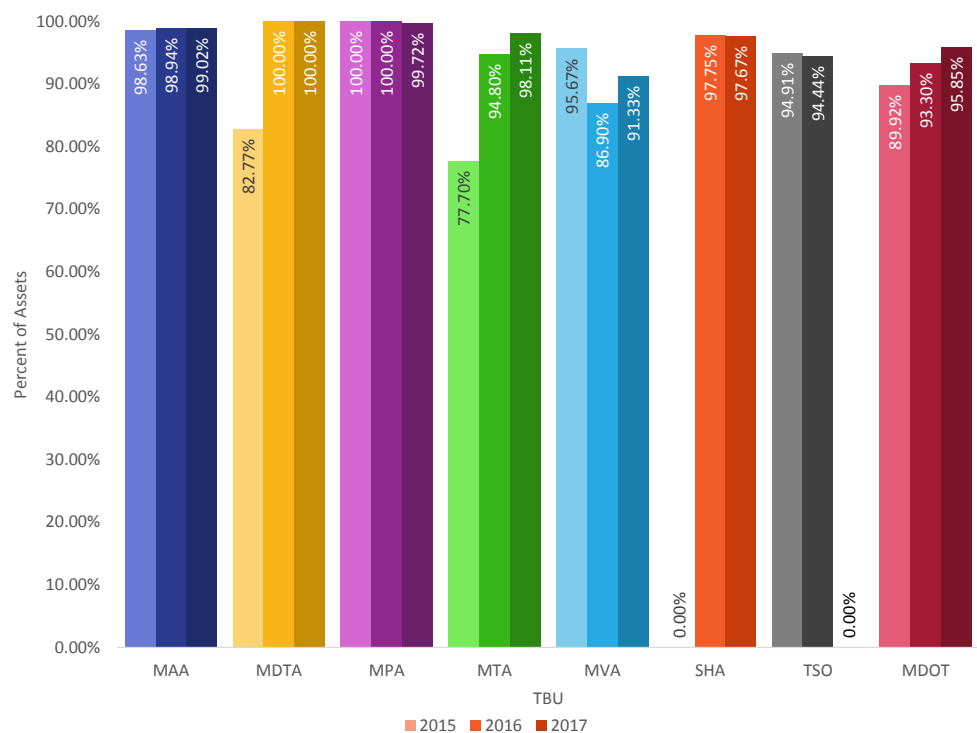
### Percentage of Fixed Asset Units Identified or Accounted for During the Annual Physical Inventory of Fixed Assets

*"You can't control what you can't measure." — Tom Demarco*

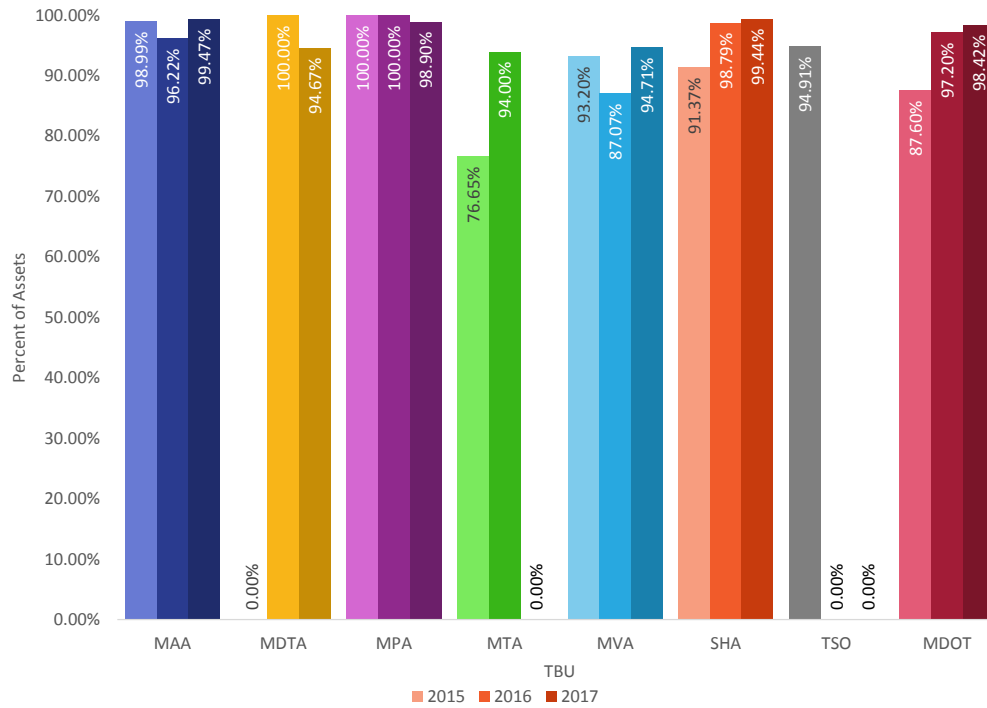
This measure emphasizes the importance of stewardship and internal controls with respect to fixed assets owned by each of the TBUs. This performance measure reports the percentage of fixed assets counted by each business unit during its annual fixed asset physical inventory versus the number of fixed assets recorded in each business unit's official inventory records. A regularly-conducted physical inventory of fixed assets ensures accurate information for the management of assets and discourages fraud.

Currently, five of seven business units conduct a full inventory of nonsensitive Items once every three years and a full inventory of sensitive items annually. The remaining business units, MAA and SHA, conduct a full inventory of both sensitive and non-sensitive items annually.

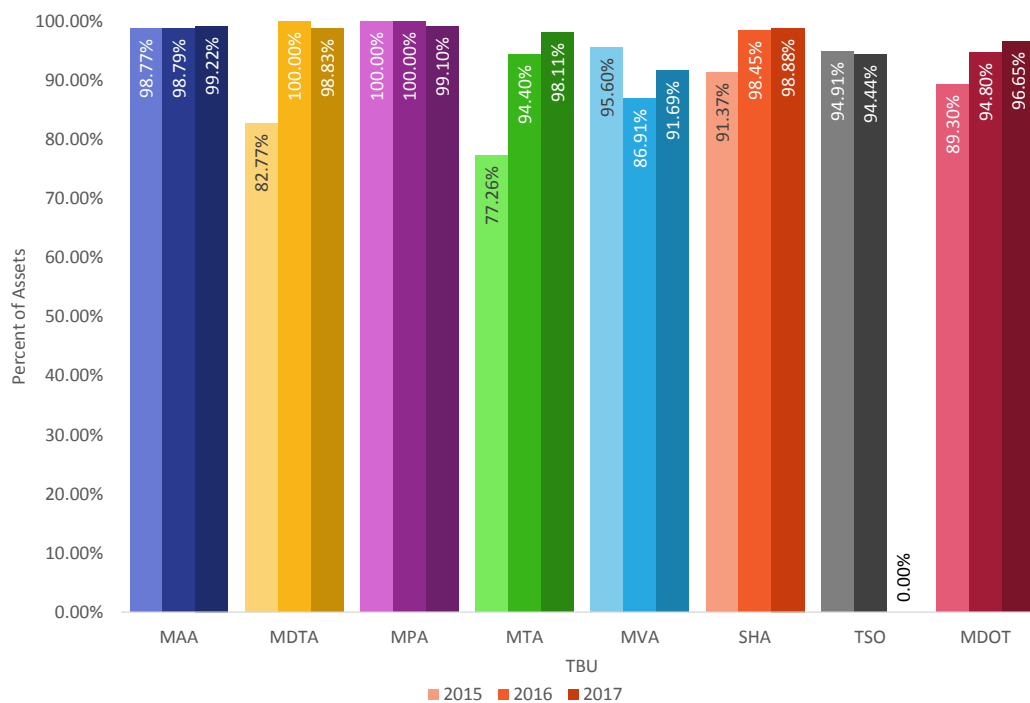
**Chart 2.6.1: Sensitive Assets Found by TBU 2015-2017**



**Chart 2.6.2: Non-Sensitive Assets Found by TBU 2015-2017**



**Chart 2.6.3: Total Assets Found by TBU 2015-2017**



**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer

*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Sejal Barot

*State Highway Administration (SHA)*

Dan Favarulo

*The Secretary's Office (TSO)*

**PURPOSE OF MEASURE:**

Provide an overview which shows how TBUs monitor asset management activities.

**FREQUENCY:**

Annually

**DATA COLLECTION METHODOLOGY:**

Asset inspection condition and asset life-cycle cost analyses are compiled at the TBU level.

**NATIONAL BENCHMARK:**

N/A

**PERFORMANCE MEASURE 2.7****Managing Capital Assets**

*"One of the great responsibilities that I have is to manage my assets wisely, so that they create value." — Alice Walton*

Customers deserve to know that MDOT is strategically managing its diverse capital assets. Each TBU maintains its physical assets according to policies that minimize asset life-cycle cost while avoiding negative impacts on the delivery of transportation services.

As part of this measure, MDOT has embarked on a department wide asset management program to better understand the infrastructure assets owned and their performance/condition. The department program is focused on seven critical infrastructure assets: pavement, structures, tunnels, rail, vehicles and equipment, facilities, and IT systems.

Each of these critical infrastructure assets are reported annually to the Secretary's Office by each TBU to monitor inventory and growth of assets. In addition, conditioning and inspection protocols as well as performance measurements are developed for each of these critical assets to gauge how well they are being maintained, their performance and cost of maintenance. The data reported under this measurement is gathered through asset management systems, inspections, conditioning protocols, surveys and operational practices.

## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7A.1: Vehicles/Equipment by TBU 2017

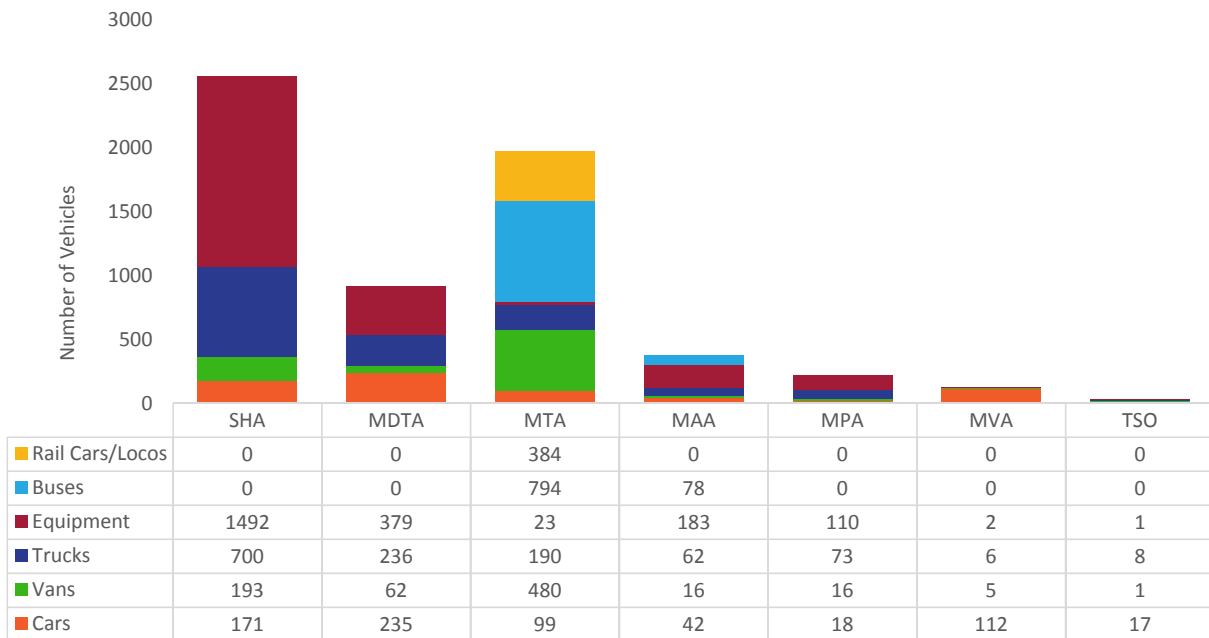
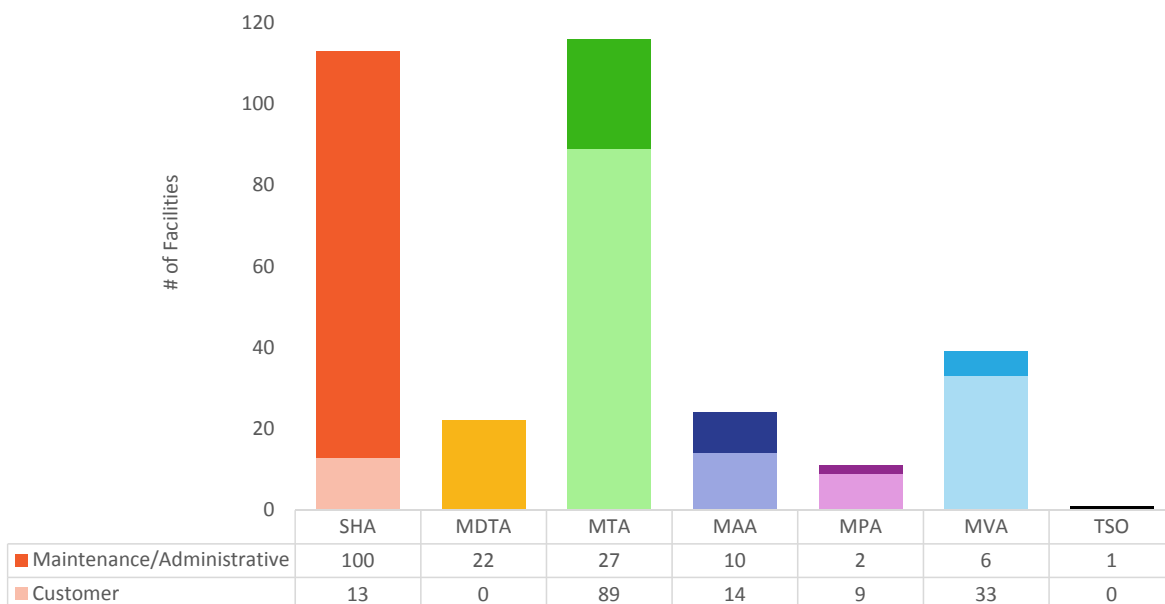


Chart 2.7A.2: Number of Facilities by TBU 2017



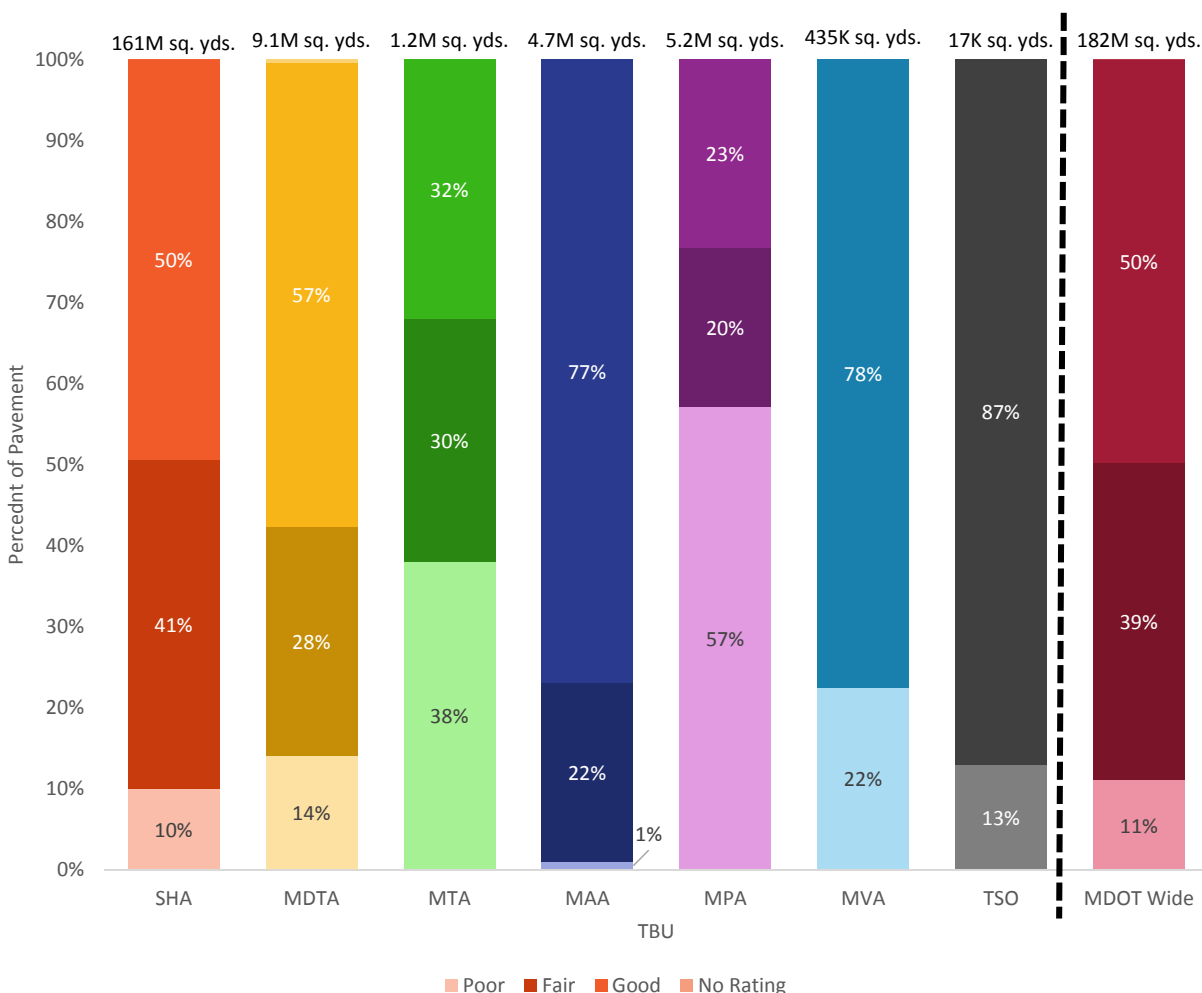


## PERFORMANCE MEASURE 2.7 Managing Capital Assets

MDOT manages 182 million square yards of pavement across its TBUs. While the majority of pavement is roadways, MDOT also maintains airfield as well as parking/storage pavement at facilities. Overall 89 percent of MDOT's pavement assets are in fair or better condition.

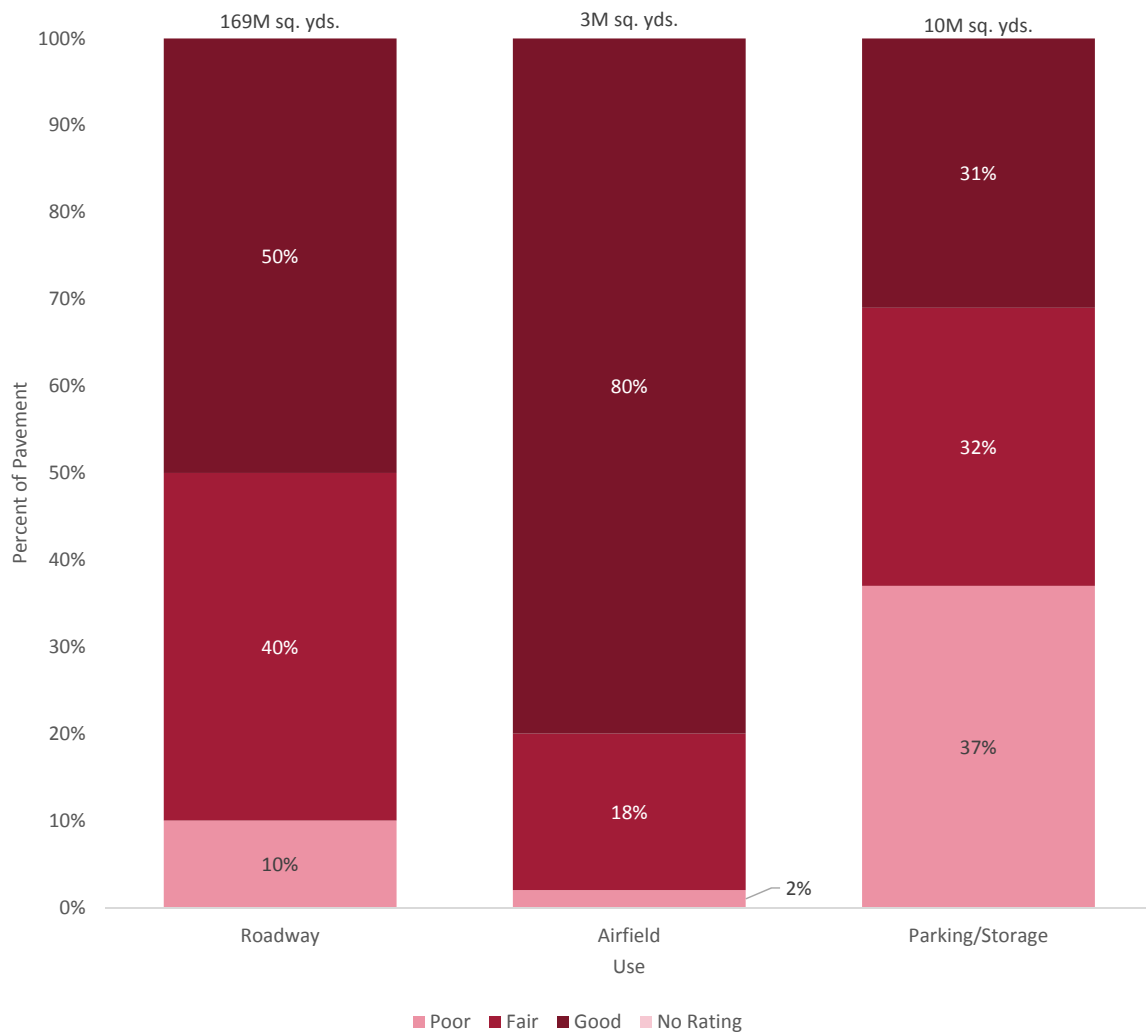
MDOT's 169 million square yards of roadway pavement across TBUs is maintained at 90 percent in fair or better condition. MDOT's 3 million square yards of airfield pavement is maintained at 98 percent in fair or better condition. The remaining 10 million square yards of pavement that MDOT maintains is located at parking lots, storage lots and facilities. Currently, 63 percent of parking/storage pavement is rated in fair or better condition.

**Chart 2.7B.1: Pavement Condition by TBU 2018**



## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7B.2: Pavement Condition by Use MDOT-Wide 2018



## PERFORMANCE MEASURE 2.7 Managing Capital Assets

MDOT manages 11,254 critical structures across its TBUs. Critical structure assets include bridges, small structures, sign structures, retaining walls, noise walls and shipping berths/piers. Currently 4% of MDOT structures are in fair or better condition.

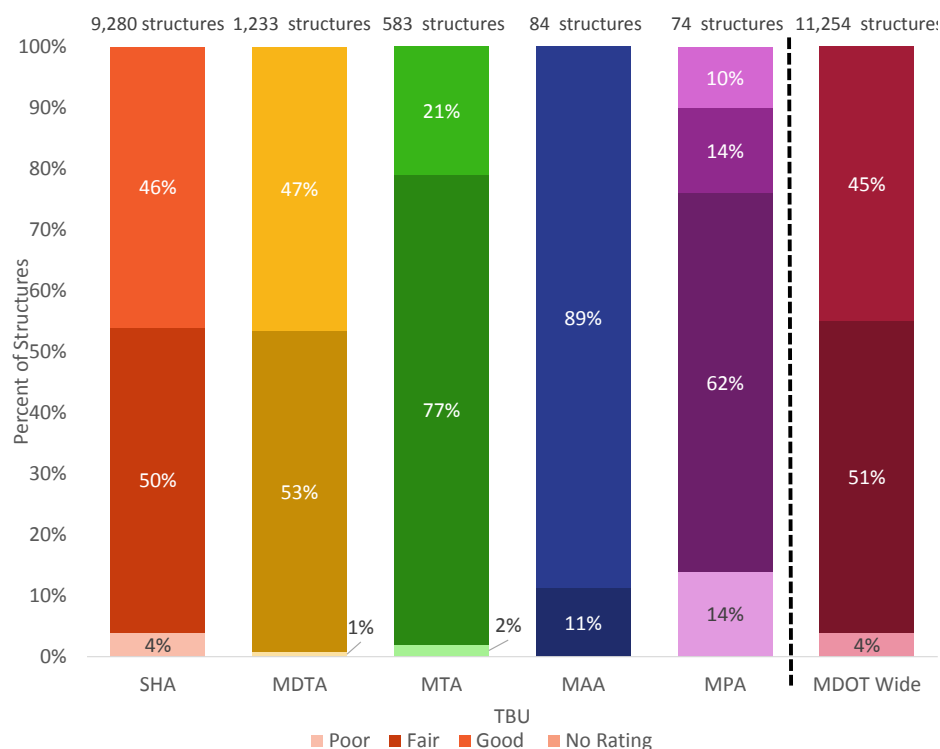
Bridge structures maintained across the department are in 98% fair or better condition. According to FHWA, 95 percent of the nation's bridges are maintained at 95% fair or better condition, making MDOT 3% better than the national rating. MDOT maintains 3,445 small structures that range from culverts over 3 feet to bridges less than 20 feet. Currently 97% of MDOT's small structures are in fair or better condition.

MDOT maintains roughly 3,040 sign structures, which are defined here as overhead or cantilever sign structures that extend over roadways. Overall 94% of MDOT's sign structures are in fair or better condition.

MDOT has 670,702 feet of noise walls and 421,640 feet of retaining walls that both maintained across the department at 98% fair or better condition.

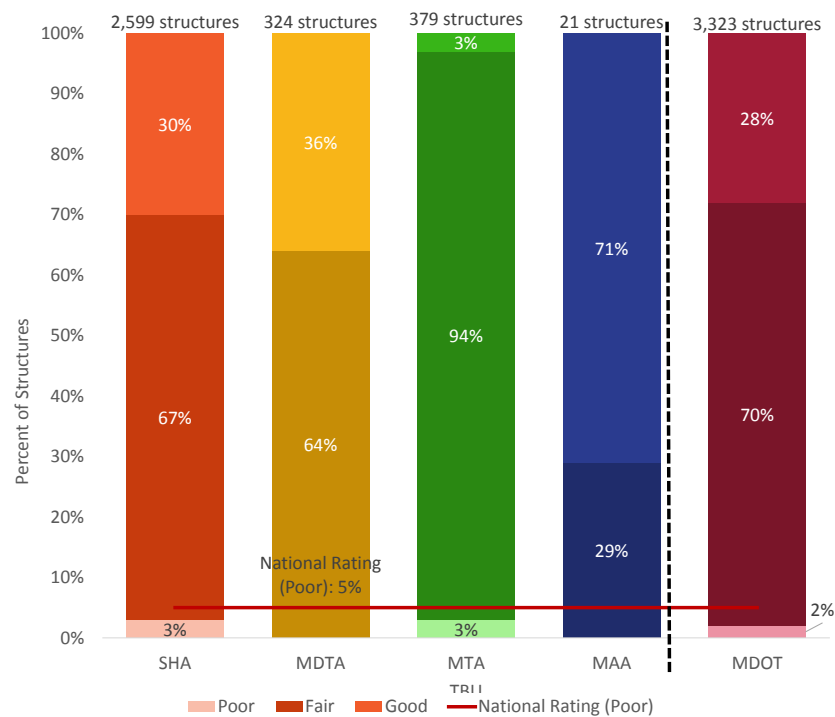
In addition, MPA maintains shipping berth structures that are critical to operations. Currently, 86% of berth/pier structures are in fair or better condition.

**Chart 2.7C.1: Structure Condition Ratings by TBU 2018**

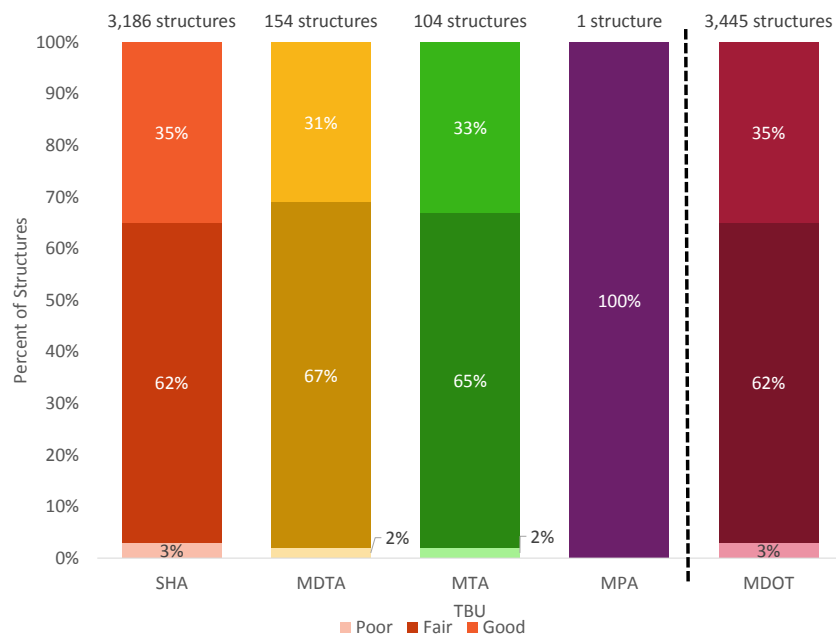


## PERFORMANCE MEASURE 2.7 Managing Capital Assets

**Chart 2.7C.2: Large Bridge Condition Ratings by TBU 2018**

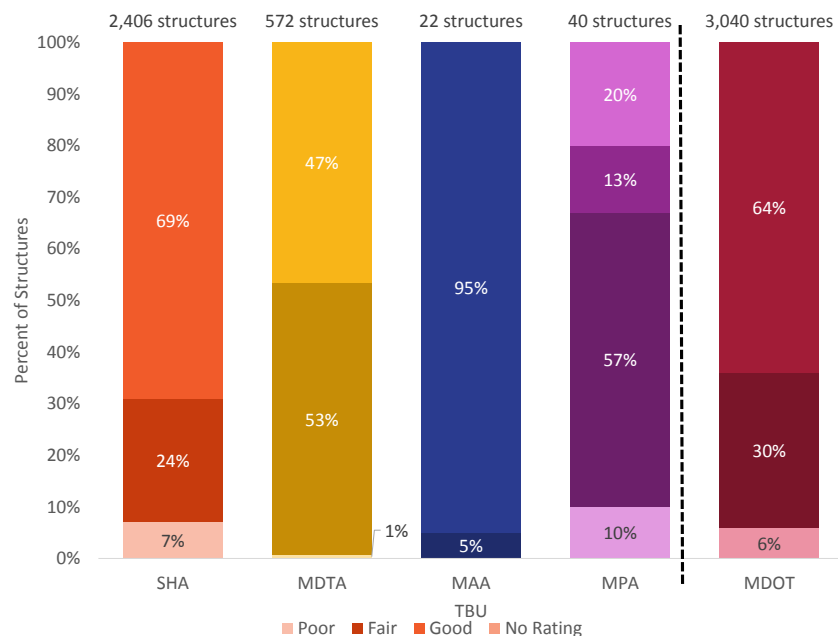


**Chart 2.7C.3: Small Structure Condition Ratings by TBU 2018**

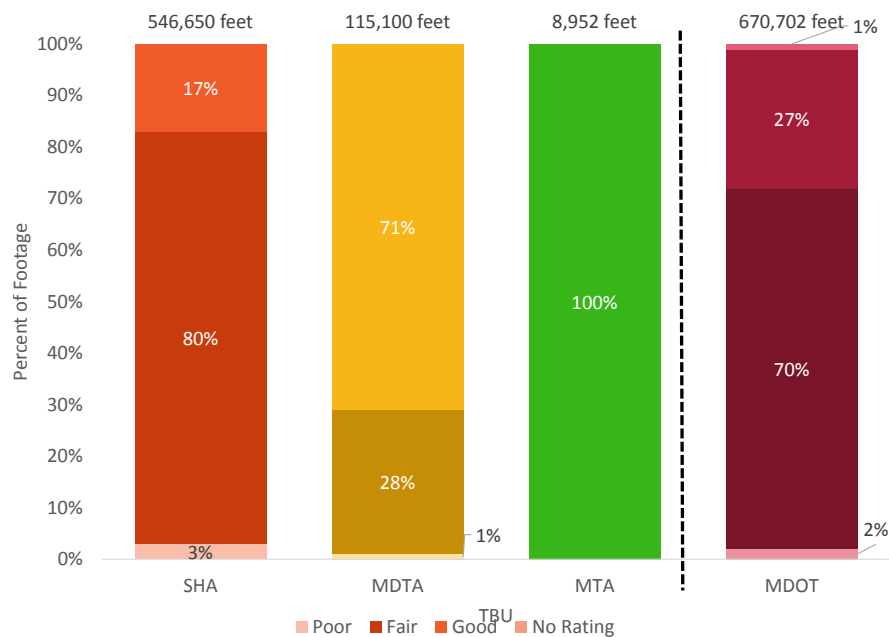


## PERFORMANCE MEASURE 2.7 Managing Capital Assets

**Chart 2.7C.4: Sign Structure Condition Ratings by TBU 2018**



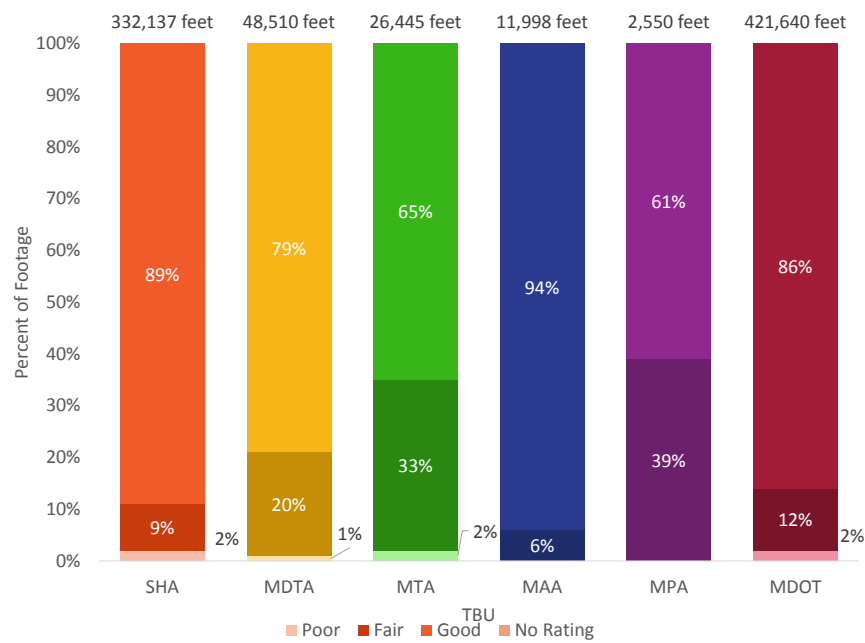
**Chart 2.7C.5: Noise Wall Condition Ratings by TBU 2018**





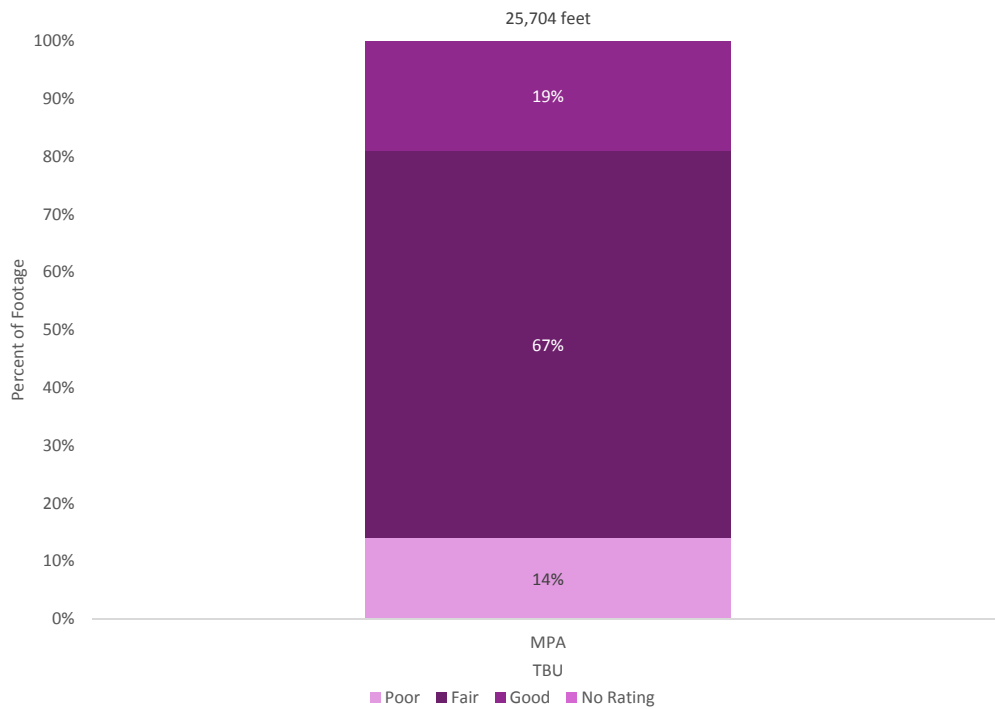
## PERFORMANCE MEASURE 2.7 Managing Capital Assets

**Chart 2.7C.6: Retaining Wall Condition Ratings by TBU 2018**



## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7C.7: Berth/Pier Condition Ratings 2018

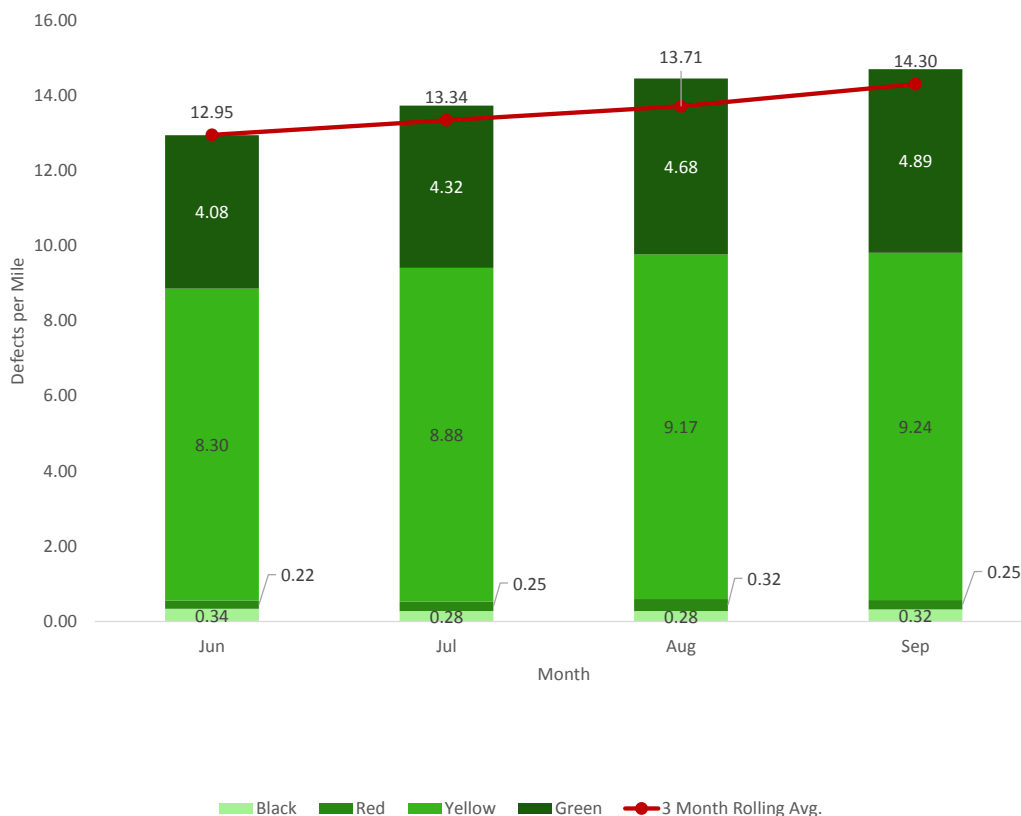


## PERFORMANCE MEASURE 2.7 Managing Capital Assets

MDOT manages 100 miles of passenger rail and 90 miles of freight rail across the State. Specifically, MDOT's Passenger Rail provides service for the Light Rail and Metro operations in Baltimore. MDOT inspects passenger rail weekly and through inspection reports identifies rail defects. Over the last 4 months that this data has been collected MDOT has identified on average 14 defects per mile each month. This is trending up over the last few months. Most of the defects are rated as yellow and green, which do not pose a significant safety risk. When looking at this data by rail line, Metro rail is driving the largest number of rail effects found each month. In addition to reporting the number of defects, it is important that MDOT addressed the defects in a timely manner given the risk and resources. On average MDOT is taking roughly a year to address defects found in inspection reports. This is reported through the average age of open work orders in Maximo each month on Maintenance of Way defects logged.

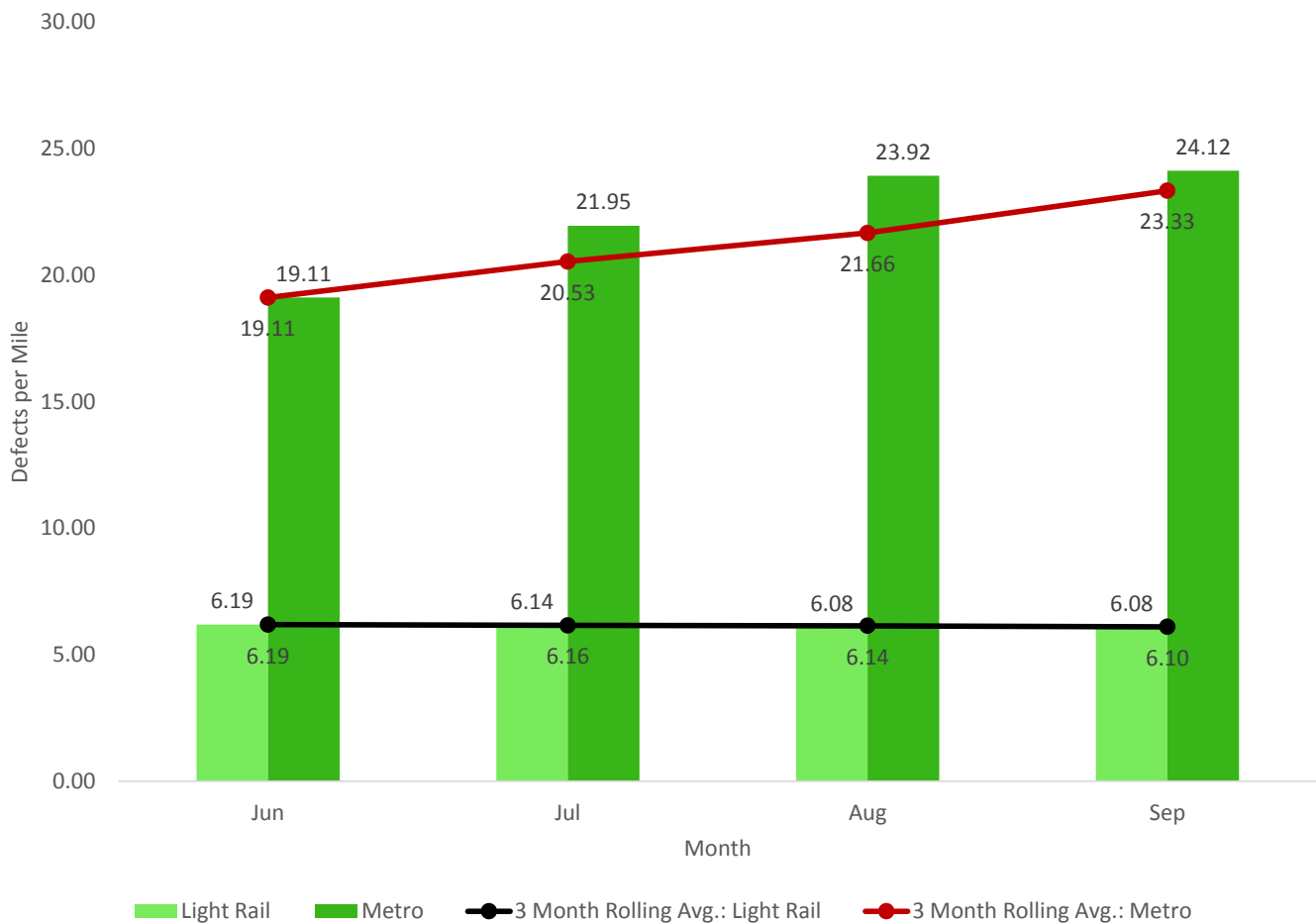
MDOT also manages 90 miles of freight rail on the Eastern Shore through agreements with rail operators. Based on speed restriction data MDOT freight rail is in 82% fair or better condition. Lastly, MDOT manages 376 passenger vehicles that operate on the passenger rail. MDOT's Rail Fleet is in 72% fair or better condition based on an age condition rating. The large majority of the poor condition vehicles are the 98 Metro rail vehicles procured in the mid-1980's.

**Chart 2.7D.1: Total Outstanding Defects per Mile, Passenger Rail (Black, Red, Yellow, and Green Lines) 2018**



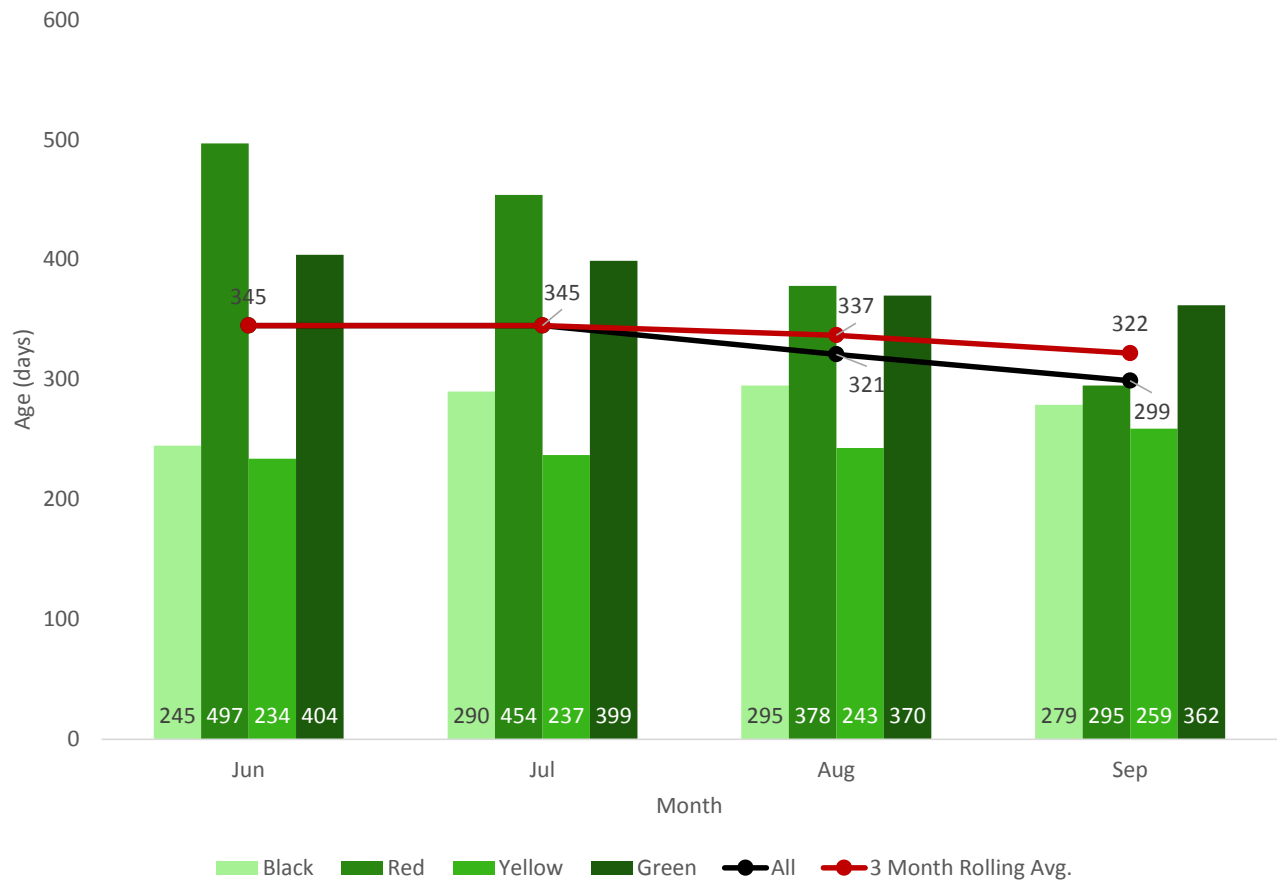
## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7D.2: Total Outstanding Defects per Mile, Passenger Rail (Light Rail and Metro) 2018



## PERFORMANCE MEASURE 2.7 Managing Capital Assets

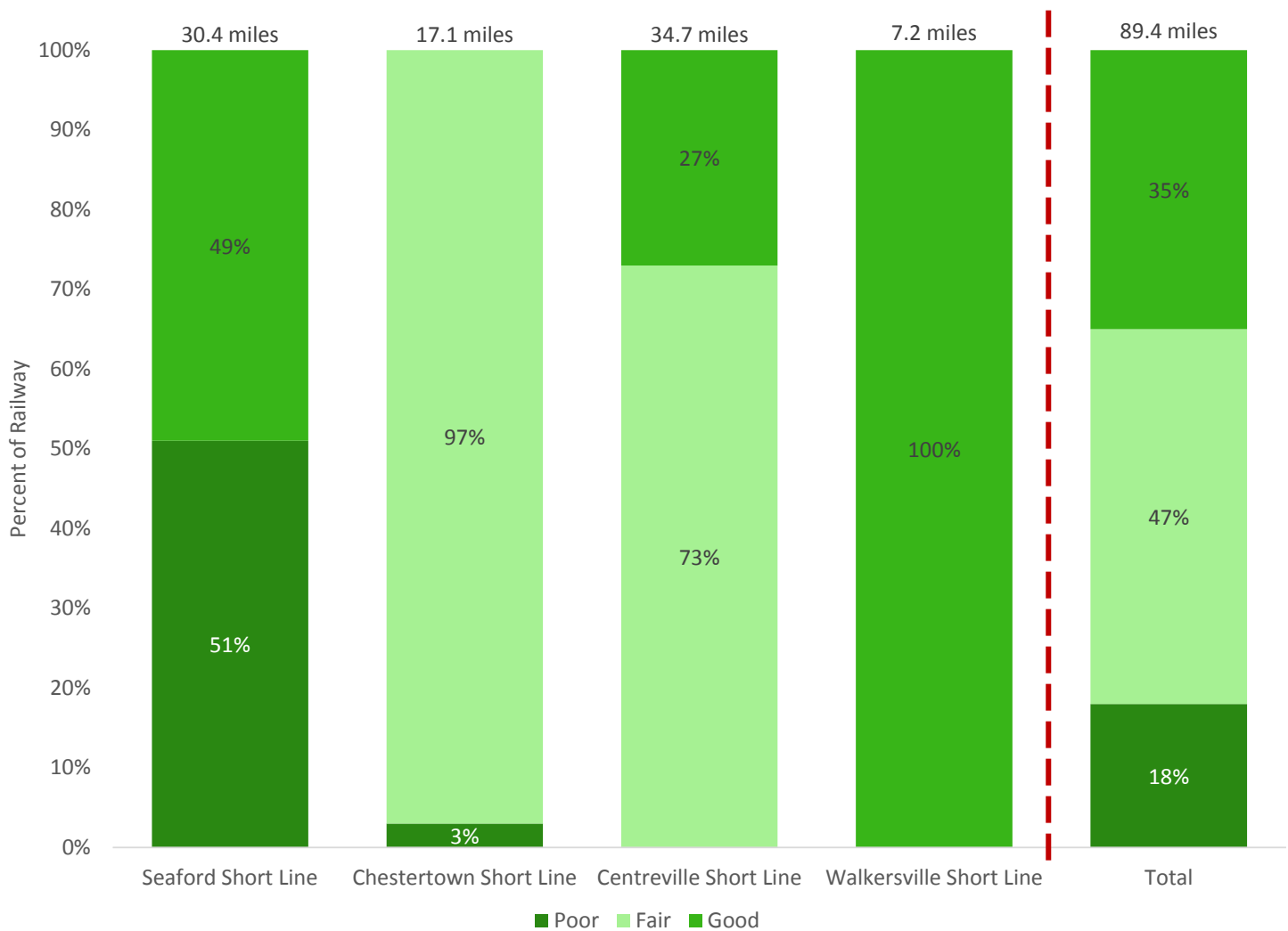
Chart 2.7D.3: Average Age of Open Work Orders for Outstanding Defects 2018





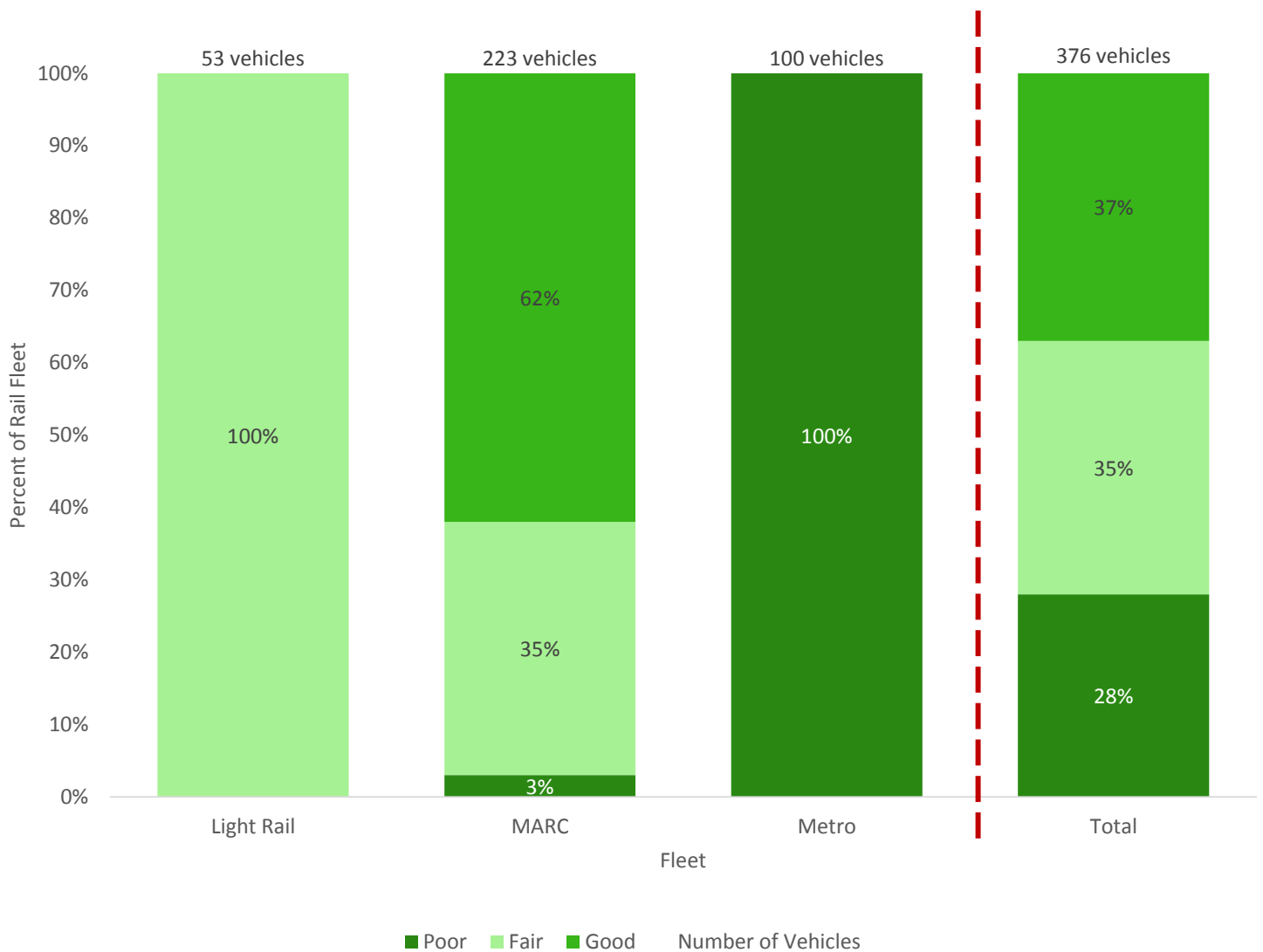
## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7D.4: Short Line Asset Condition 2018



**PERFORMANCE MEASURE 2.7**  
Managing Capital Assets

**Chart 2.7D.5: Passenger Rail Vehicle Fleet Asset Condition 2018**



## PERFORMANCE MEASURE 2.7 Managing Capital Assets

Chart 2.7E.1: Satisfaction with Smoothness of State Roads 2017

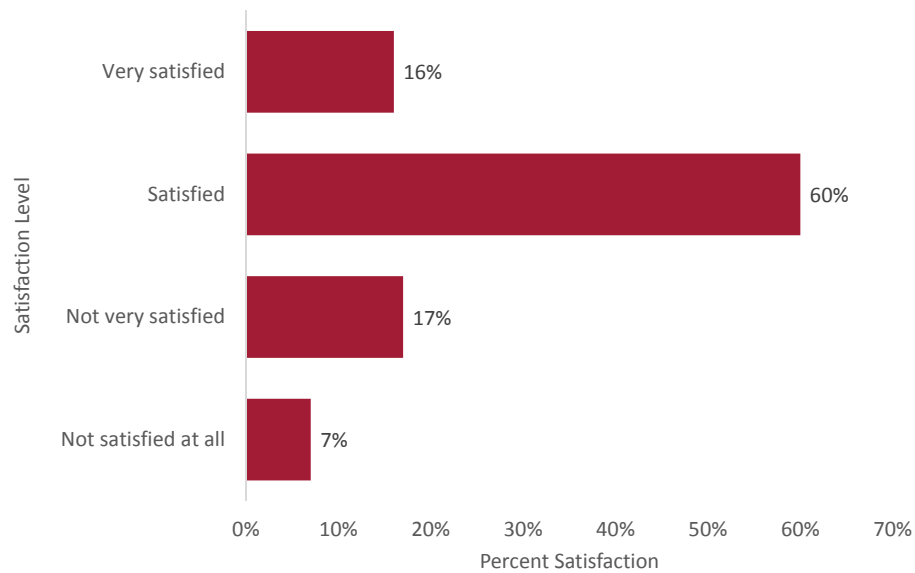
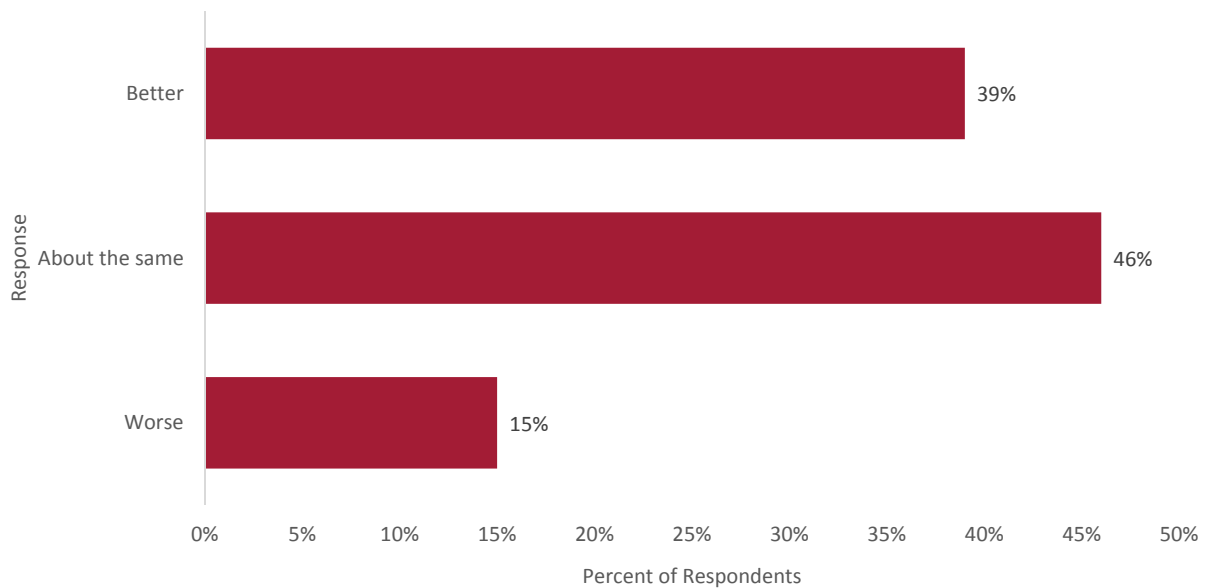


Chart 2.7E.2: Perception of Maryland's Roads Compared to Other States 2017



## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Jessica Mettle  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To track the timeliness and ability to match the budgets of the procurement process to be more efficient in our contracts.

## FREQUENCY:

Annually

## DATA COLLECTION METHODOLOGY:

Focus reports MDOT wide showing all active Blanket Purchase Orders (BPO) for the fiscal year.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.8

### Percent of Procurement on Time and on Budget

*"Price is what you pay. Value is what you get."— Warren Buffett*

The purpose of this measure is to encourage all managers to proactively monitor and manage each of their procurements to make sure that they are in line with the project and budget in an effort to improve overall contracting efficiencies. Over time managers will do a better job at setting timelines and budgets for projects. Managers will report the project status accurately and in a timely manner so that problems are identified early and corrective action taken swiftly.

While the trend is improving, we have not addressed underlying issues, and the focus must remain on identifying those contracts with concerns. The process improvement team made recommendations to Executive Staff which are now currently being implemented, specifically the creation of Office of Project Quality Assurance.

## PERFORMANCE MEASURE 2.8

### Percent of Procurement on Time and on Budget

Chart 2.8.1: Percent of Blanket Purchase Orders (BPO) Expired FY2014-FY2017

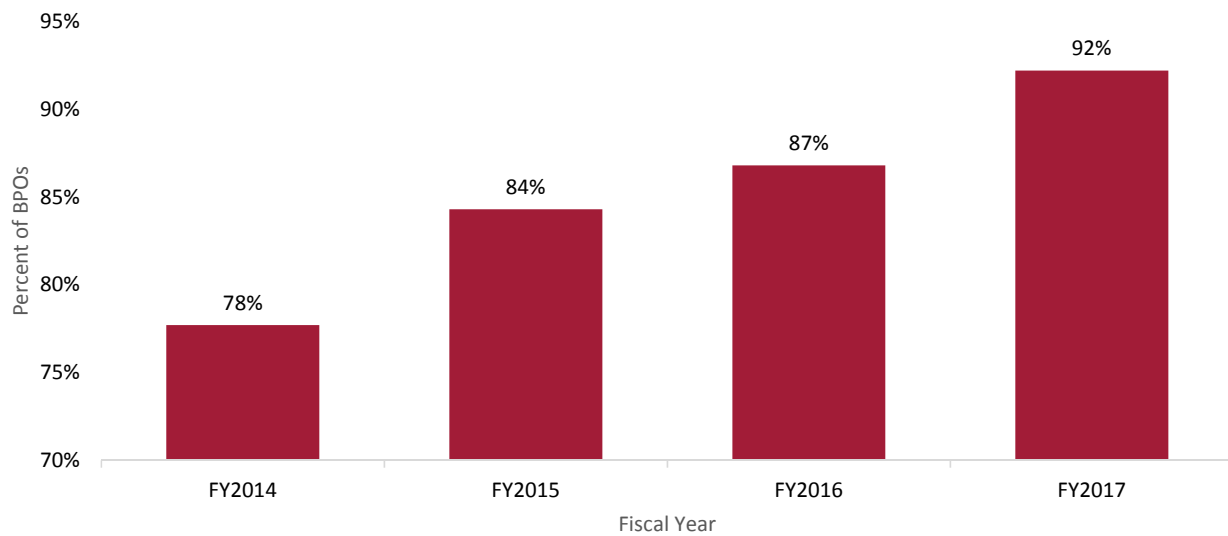
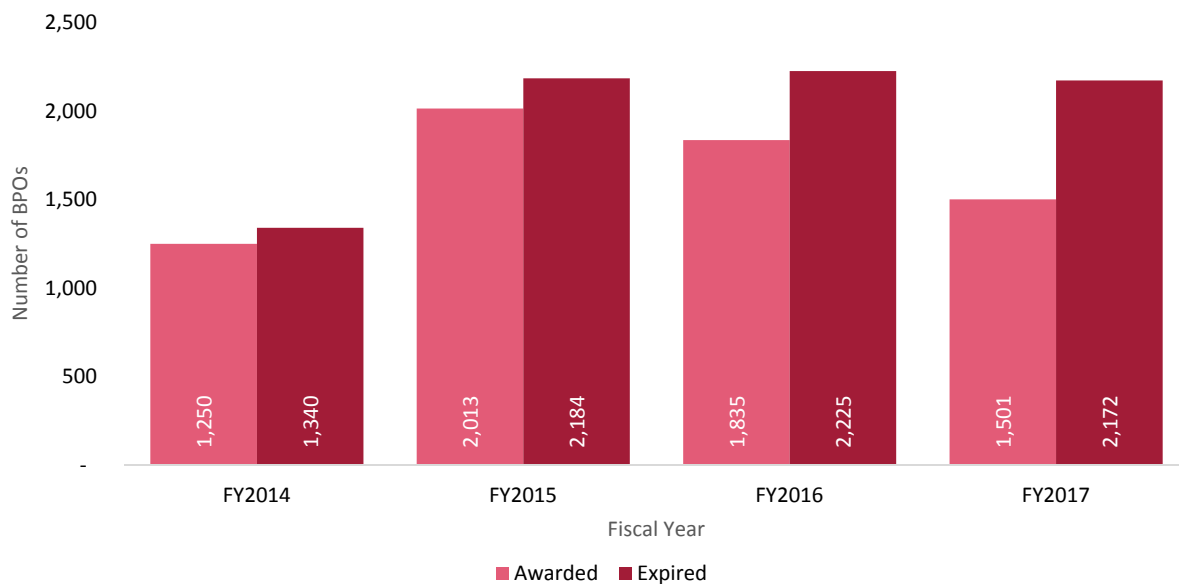


Chart 2.8.2: Number of Blanket Purchase Orders (BPOs) Awarded and Expired MDOT-Wide FY2014-FY2017



## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer

The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Pretam Harry

Motor Vehicle Administration (MVA)

## PURPOSE OF MEASURE:

To measure (a) the percent of occurrences and (b) the dollar value of unanticipated contract modifications on procurement contracts.

## FREQUENCY:

Annually (in October)

## DATA COLLECTION METHODOLOGY:

MDOT wide showing active unanticipated contract modifications equal to or greater than \$1 million.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.9

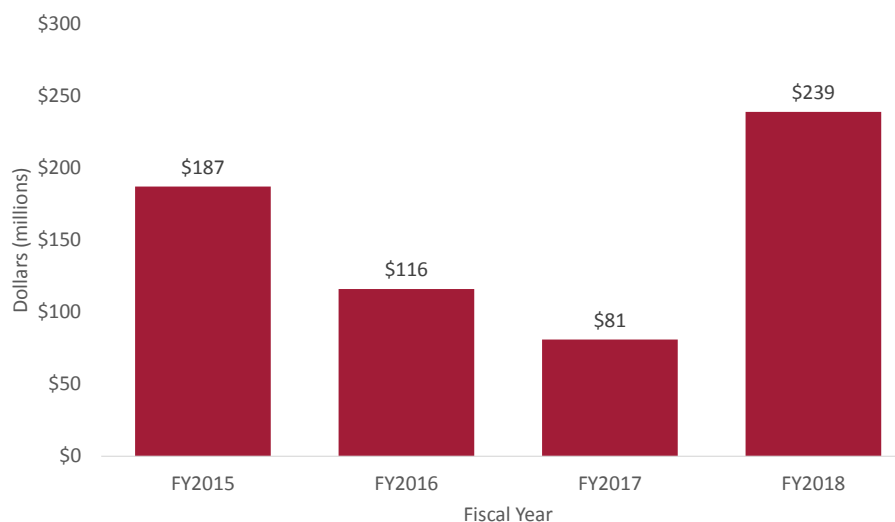
### Percent and Value of Unanticipated Contract Modifications

***"The comptroller and I — it's no secret — complain every single meeting about retroactive contracts and extension requests in order to complete new procurements." — Governor Larry Hogan***

The purpose of this measure is to encourage all managers to proactively monitor and manage each of their procurements to make sure that they are minimizing the value and amount of unanticipated contract modifications. In addition, it will encourage project staff to use timely and accurate reports that managers can analyze to examine trends in unanticipated contract modifications.

The amount and value of contract modifications will vary from one TBU to another depending on the type of project. For example, construction contracts, because of the uncertainties due to weather conditions or soil conditions, may require more contract modifications than building maintenance contracts. Similarly, an IT development contract may require more contract modifications than an IT maintenance contract.

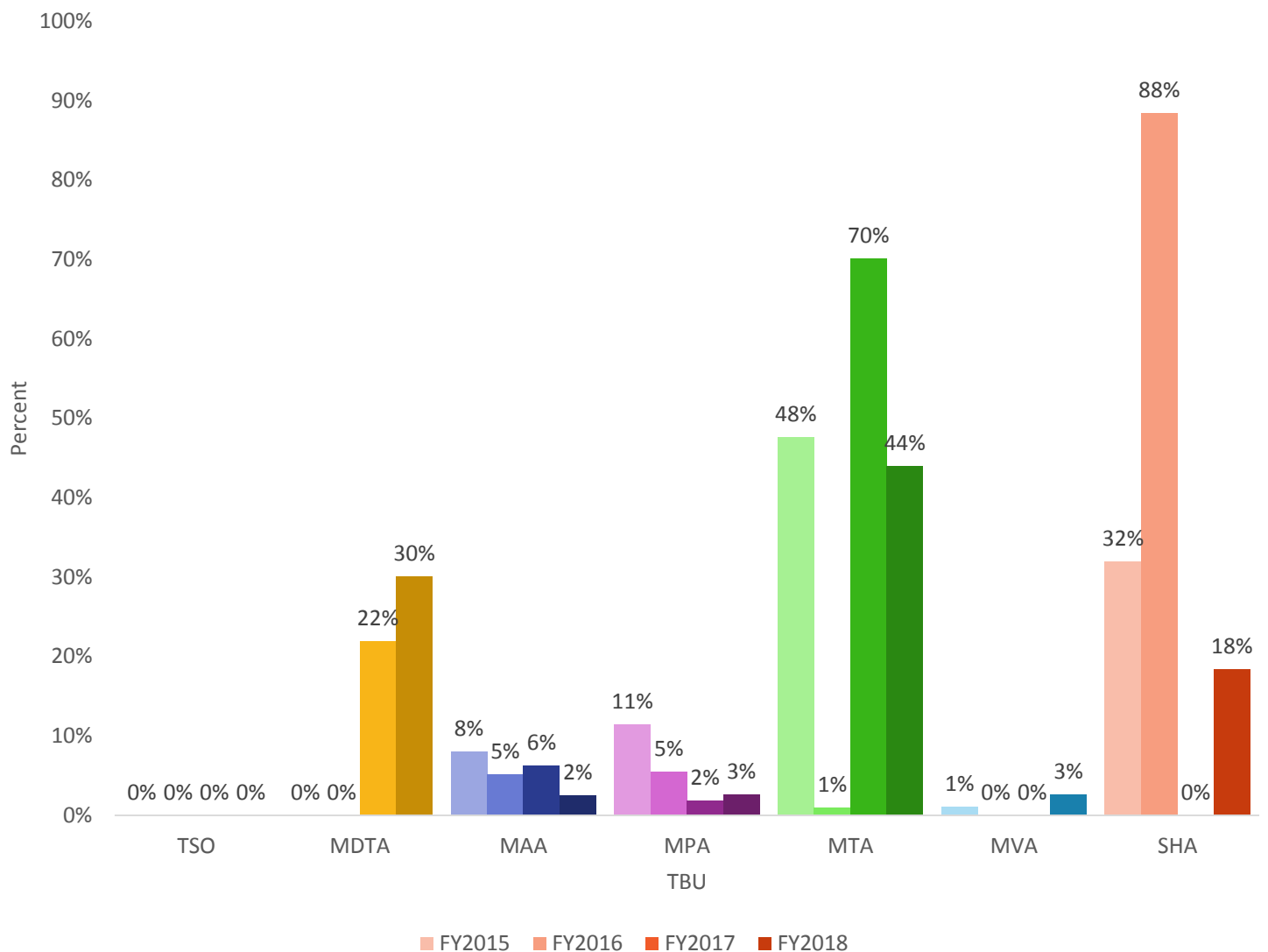
**Chart 2.9.1: Value of Unanticipated Contract Modifications in Millions of Dollars MDOT-Wide FY2015-FY2018**



## PERFORMANCE MEASURE 2.9

### Percent and Value of Unanticipated Contract Modifications

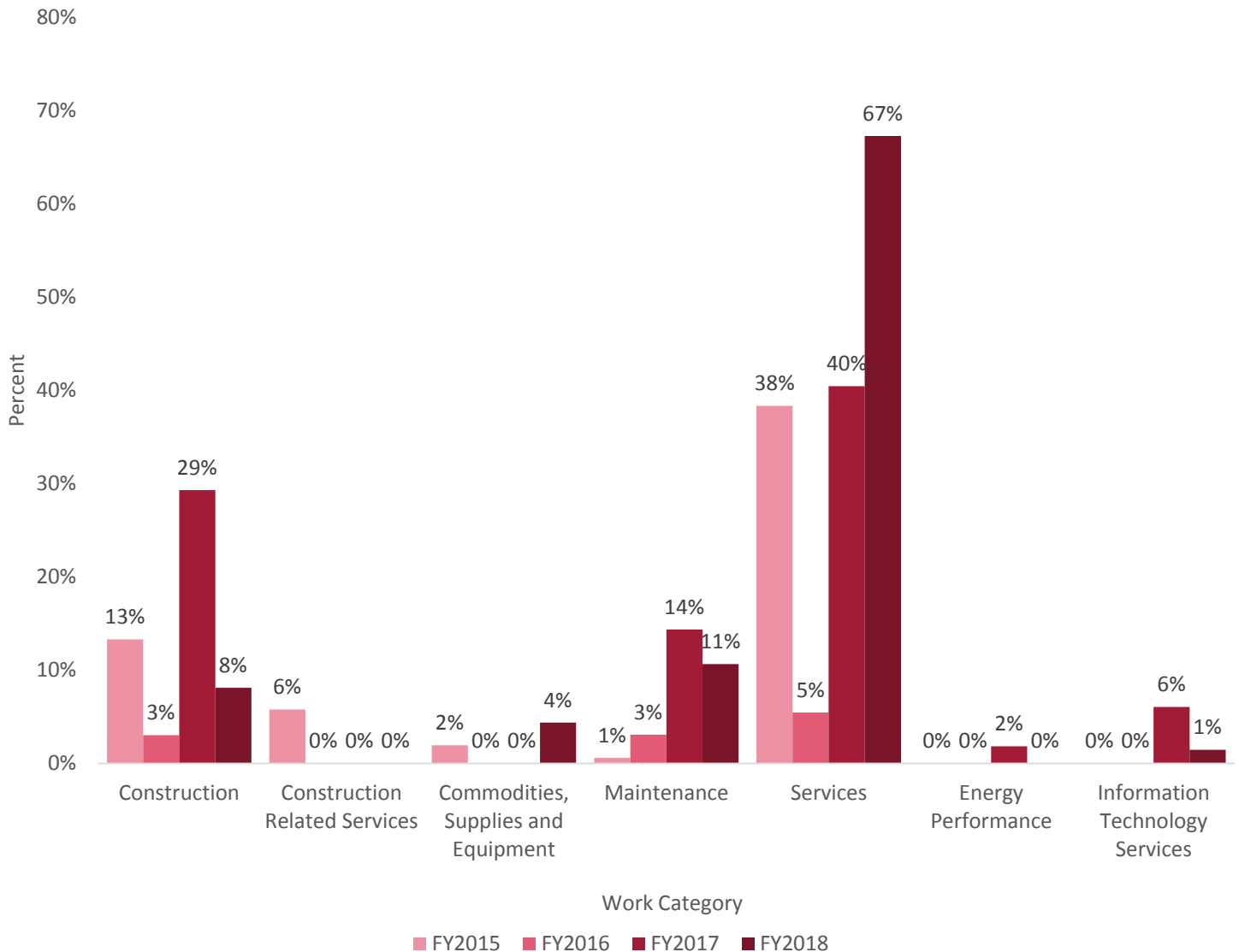
Chart 2.9.2: Percent of Unanticipated Contract Modification Dollars Spent by TBU FY2015-FY2018



## PERFORMANCE MEASURE 2.9

### Percent and Value of Unanticipated Contract Modifications

**Chart 2.9.3: Percent of Unanticipated Contract Modification Dollars Spent by Category of Work FY2015-FY2018**





## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Scott Schell  
*Maryland Transit Administration (MTA)*

## PURPOSE OF MEASURE:

To understand how procurement competition impacts MDOT resources.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Data was collected on each TBU procurement contract over \$200,000. Sole source, emergency, and intergovernmental purchasing procurements were not included, as they have their own processes for determination. Procurement contract ID, number of bids, estimated cost and final contract amount were the used data points.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.10

### Relationship Between Procurement Competition and Cost

*"Competition is the keen cutting edge of business, always shaving away at costs." — Henry Ford*

The purpose of this performance measure is to assess the impact of procurement competitiveness on contract costs, testing the hypothesis that increased competition leads to a better price. The chart below suggests that, in most cases as the number of bids increase, procurement contracts come in at or below cost estimate. The procurements that increased in cost had a low number of bids.

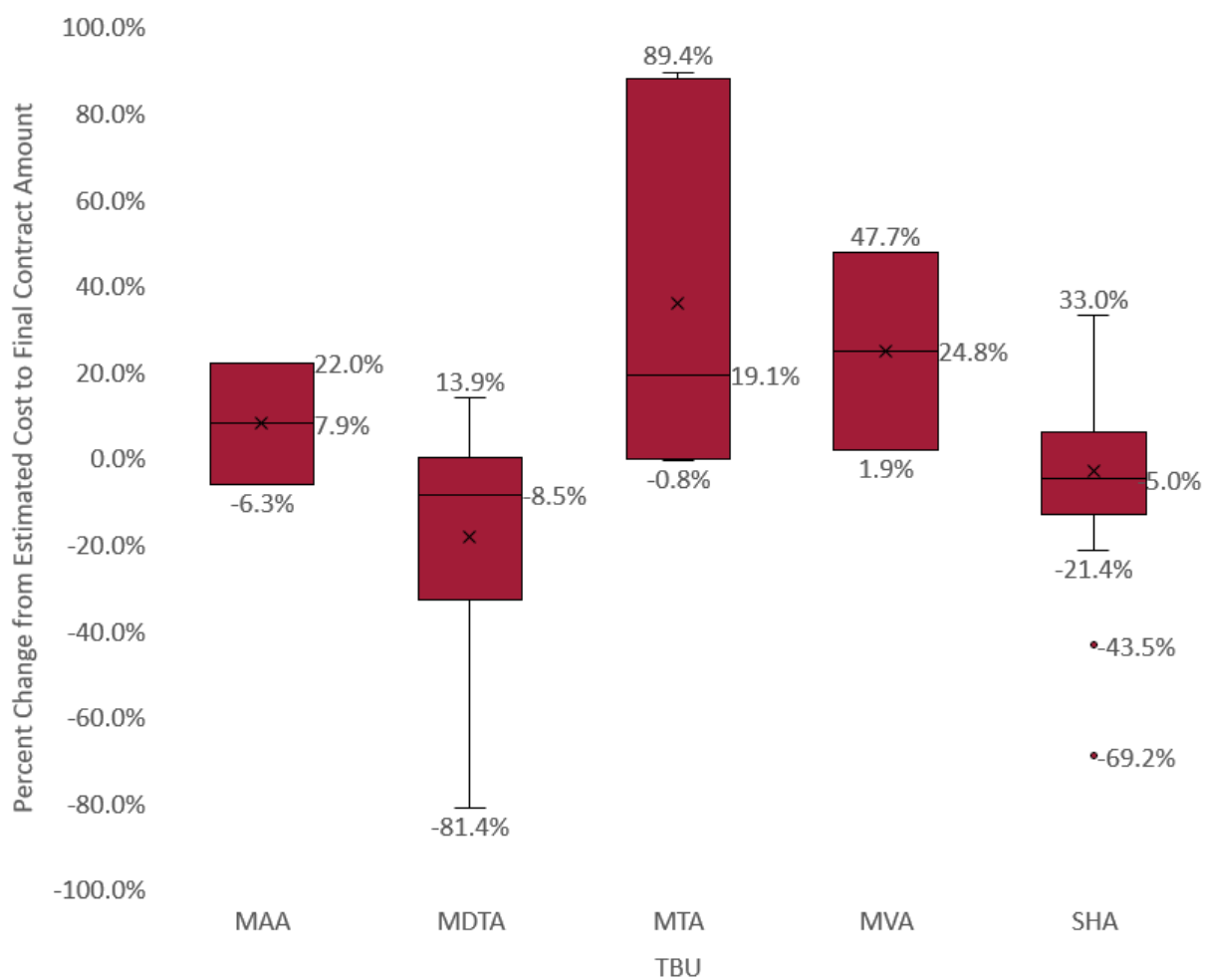
The data trend revealed the need to develop an MDOT-wide initiative to track cost estimates on procurement contracts and to evaluate the process for determining estimates.

In Q4 CY2017, an MDOT wide project improvement team forwarded to the Secretary recommendations for many standardized processes and procedures that are proposed to provide more consistency throughout all MDOT TBU's. Recommendations include development of a standardized (ICE) price estimate procedure, and a more comprehensive centralized database for contract information.

## PERFORMANCE MEASURE 2.10

### Relationship Between Procurement Competition and Cost

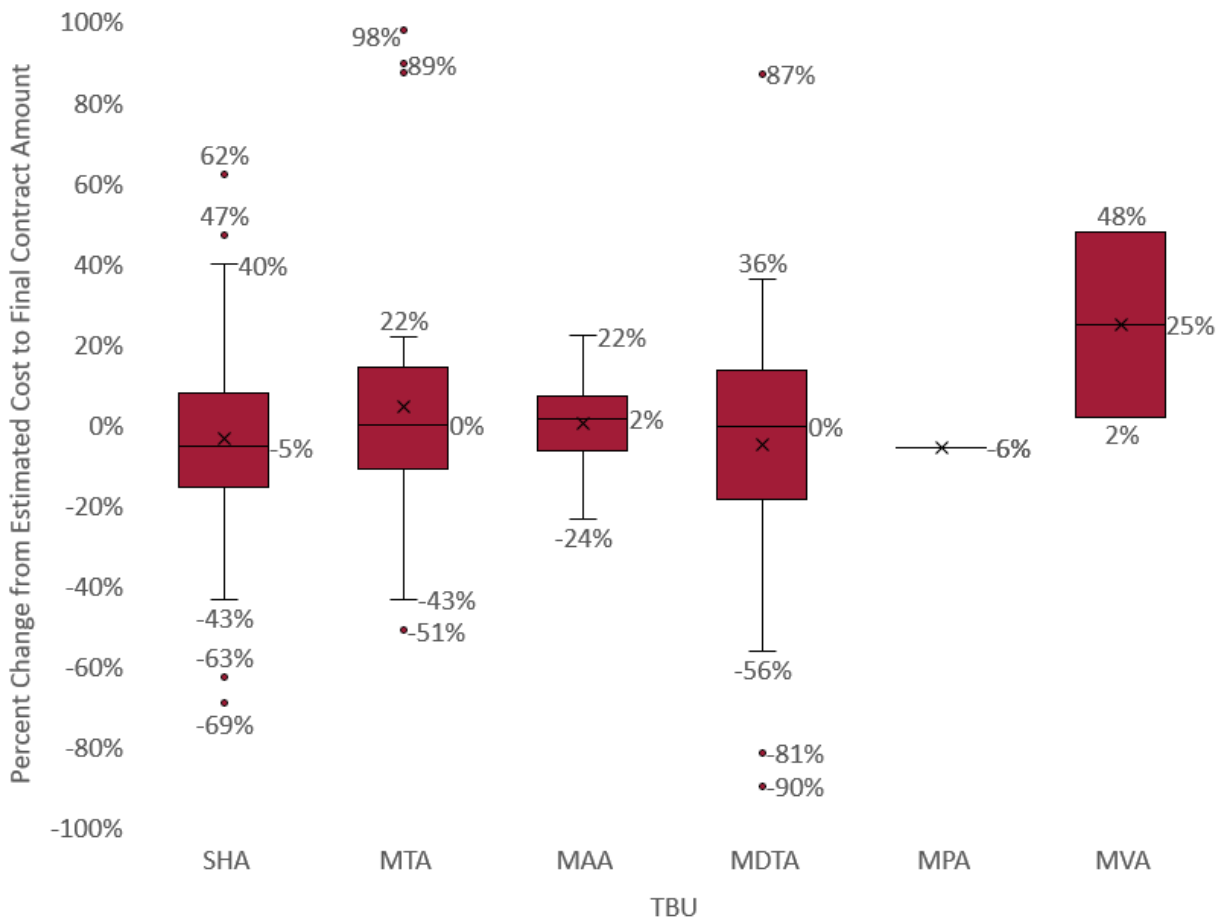
Chart 2.10.1: Actual Cost vs. Cost Estimates by TBU Q2 CY2018



## PERFORMANCE MEASURE 2.10

### Relationship Between Procurement Competition and Cost

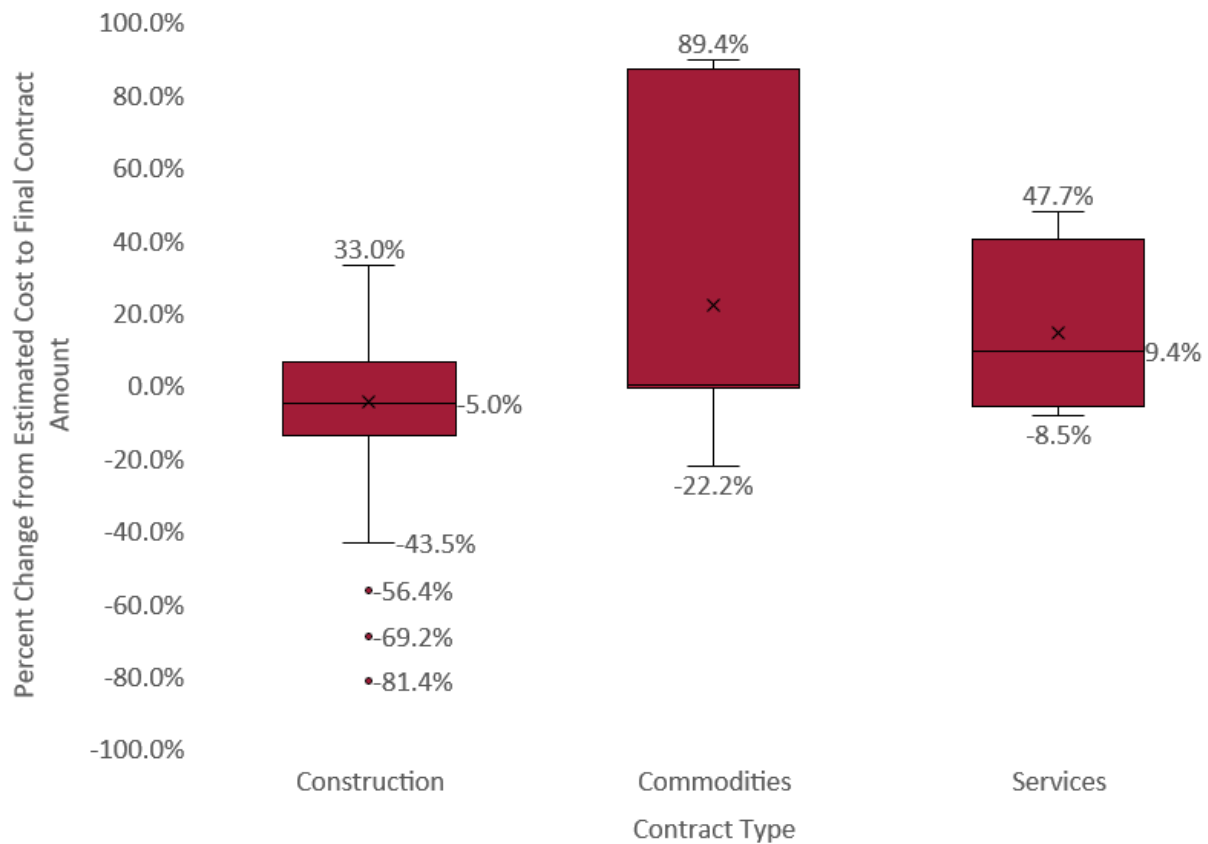
Chart 2.10.2: Actual Cost vs. Cost Estimates by TBU Q2 CY2017-Q2 CY2018



## PERFORMANCE MEASURE 2.10

### Relationship Between Procurement Competition and Cost

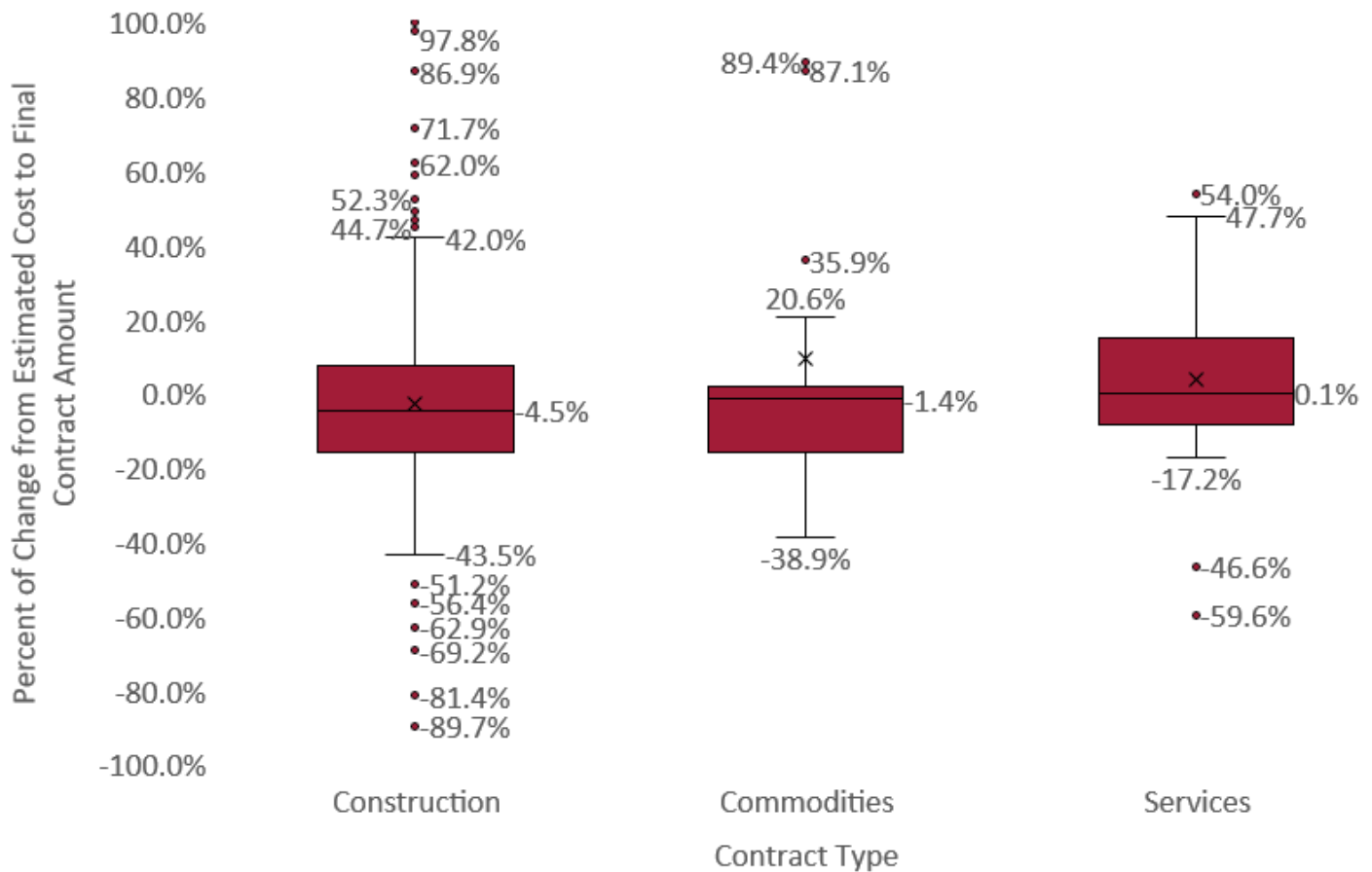
Chart 2.10.3: Actual Cost vs. Cost Estimates by Contract Type Q2 CY2018



## PERFORMANCE MEASURE 2.10

### Relationship Between Procurement Competition and Cost

Chart 2.10.4: Actual Cost vs. Cost Estimates by Contract Type Q2 CY2017-Q2 CY2018



## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
The Secretary's Office (TSO)

## PERFORMANCE MEASURE DRIVER:

Patrick Bradley  
Maryland Aviation Administration  
(MAA)

## PURPOSE OF MEASURE:

To monitor compliance with State and organizational operating processes and procedures each year by tracking the number of Internal Audit Findings and Repeat Internal Audit Findings.

## FREQUENCY:

Annually (in October)

## DATA COLLECTION METHODOLOGY:

Information collected from TBU audit databases.

## NATIONAL BENCHMARK:

N/A

## PERFORMANCE MEASURE 2.11

### Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

*"Internal audit . . . the coolest profession in the world." — Tom Peters*

Transparent, informative, and accurate financial reporting is essential for our customers to have confidence in MDOT's ability to manage resources. Audits provide a window into current systems and areas for improvement. Data will be presented by TBU in the number of audit findings and repeat audit findings on an annual basis. This will encourage MDOT and each TBU to avoid audit and repeat audit findings.

From FY2013-FY2018, there were 1,017 Internal Audit Findings. The number of Repeat Internal Audit Findings totaled 56 from FY2013-FY2018, dealing with materials and supplies management (28 findings), promotional expense documentation and authorization (12 findings), fixed asset inventories (6 findings), MBE subcontractors reporting and compliance reviews (2 findings), overtime approvals not being documented (2 findings) and one finding each on the COMAR competitive bid process, quality assurance reviews not signed, improper auto title lien documentation, commute vehicle policy review, "floater" employee location policy and Federal reimbursement expenditure issues.

The repeat audit findings of materials and supplies management include such items as segregation of duties, access to storeroom, non-signed receipts, perpetual inventory records not being accurate, documentation issues and inventory turning over less than three times per year.

From FY2013-FY2016, of 627 total Internal Audit Findings, 32 were Repeat Internal Audit Findings or 5.1 percent.

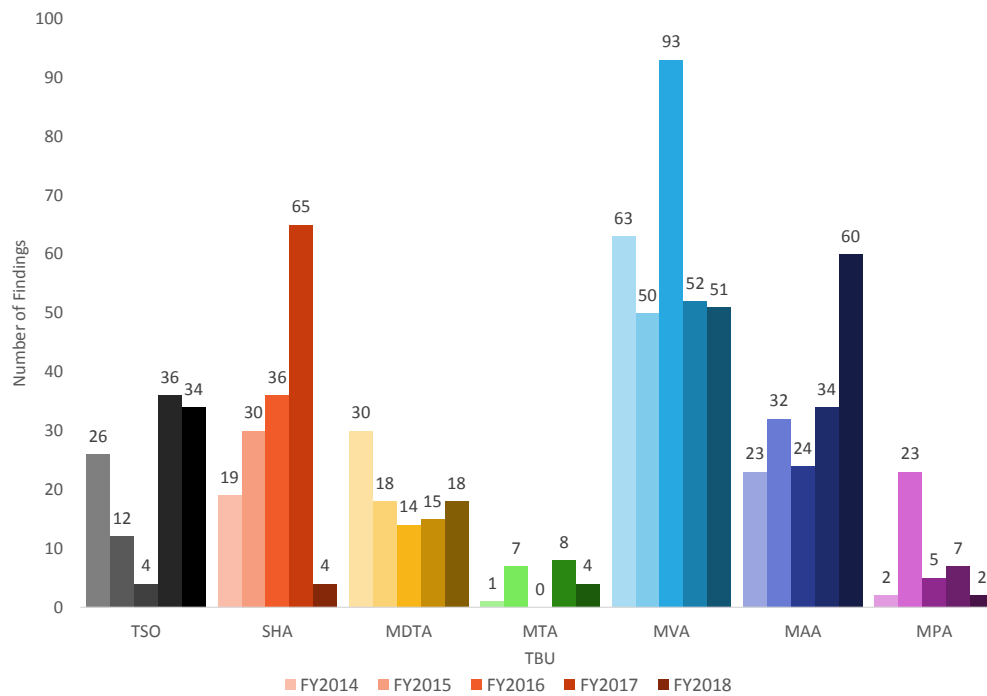
From FY2013-FY2017, of 844 total Internal Audit Findings, 44 were Repeat Internal Audit Findings or 5.2 percent.

From FY2013-FY2018, of 1,017 total Internal Audit Findings, 56 were repeat Internal Audit Findings or 5.5 percent.

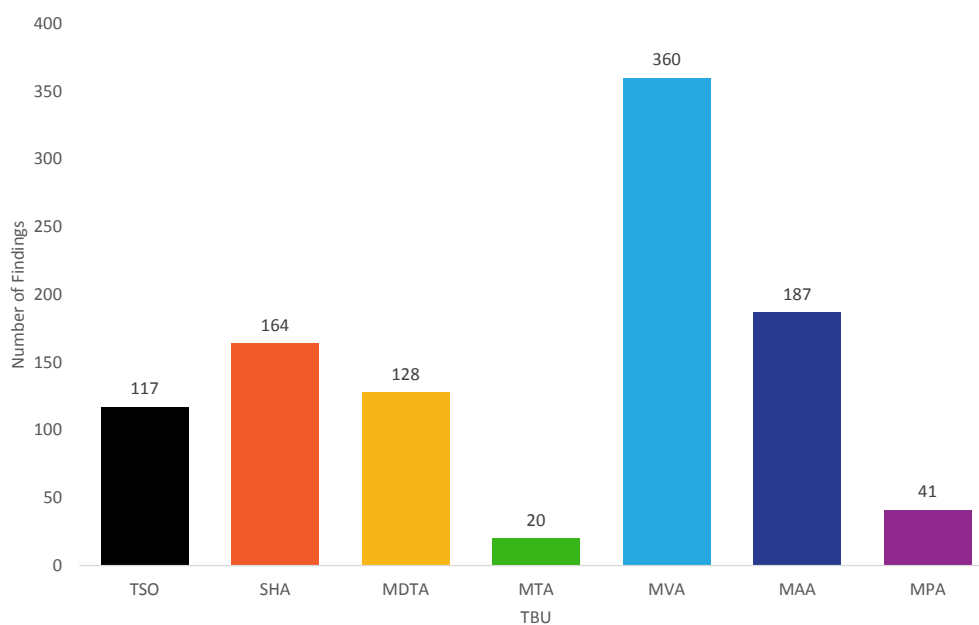
## PERFORMANCE MEASURE 2.11

### Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

**Chart 2.11.1: Number of Internal Audit Findings by TBU FY2014-FY2018**



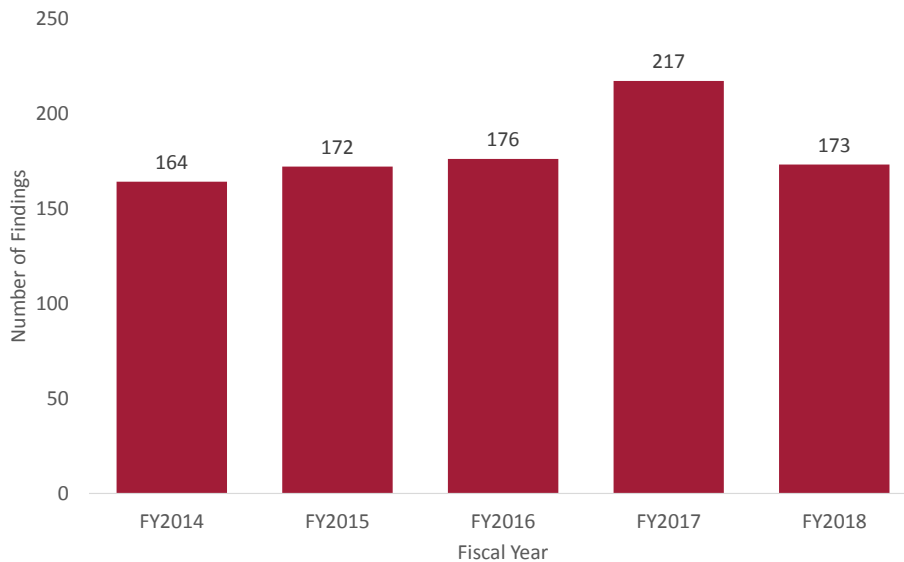
**Chart 2.11.2: Number of Total Internal Audit Findings by TBU FY2013-FY2018**



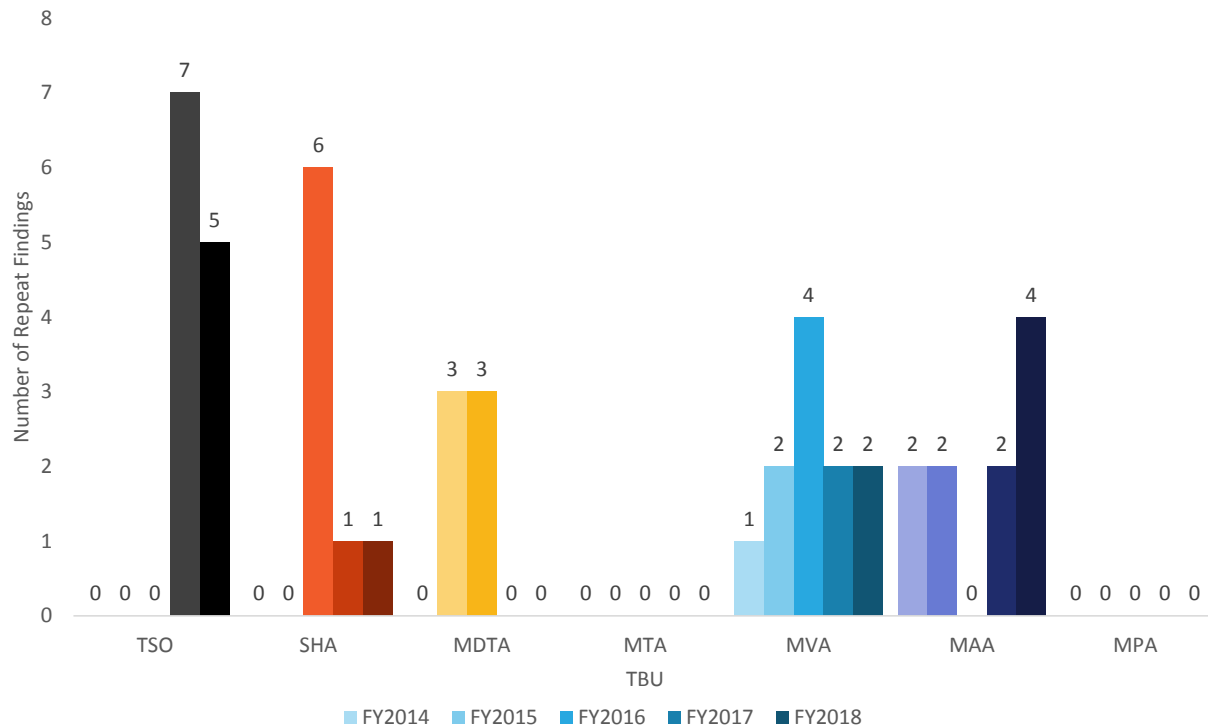
## PERFORMANCE MEASURE 2.11

### Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

**Chart 2.11.3: Total Internal Audit Findings MDOT-Wide FY2014-FY2018**



**Chart 2.11.4: Number of Internal Audit Repeat Findings by TBU FY2014-FY2018**

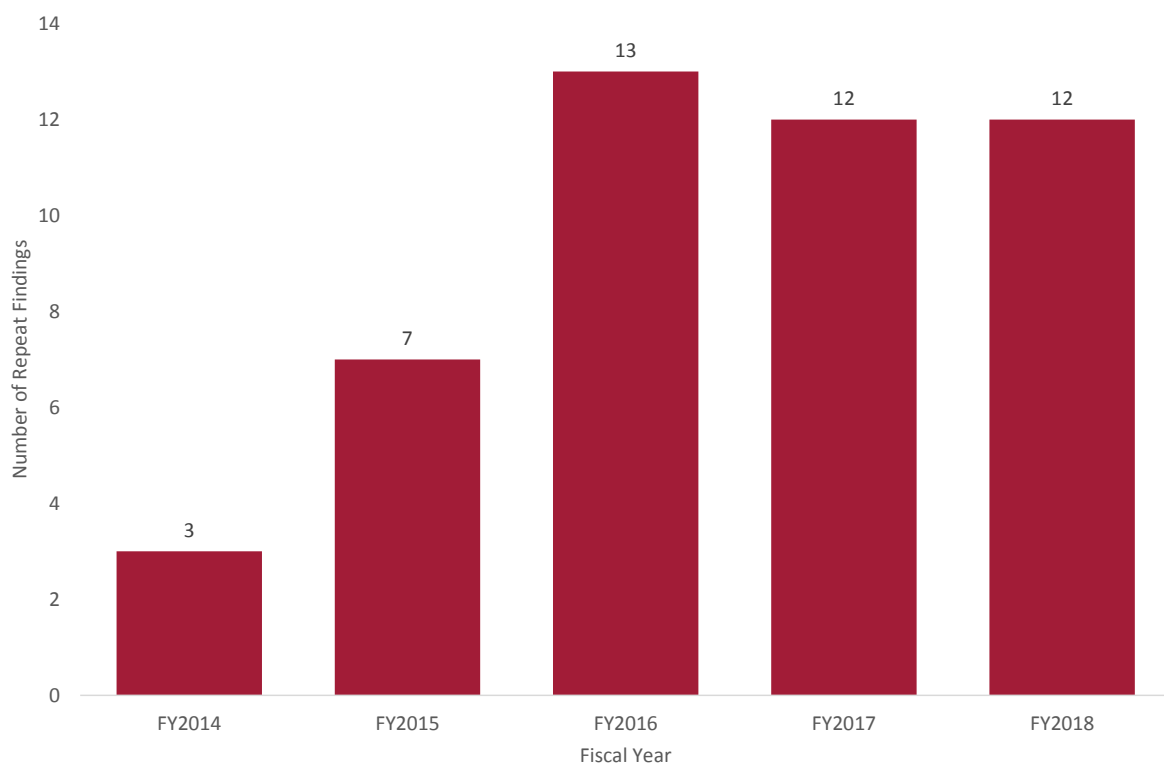


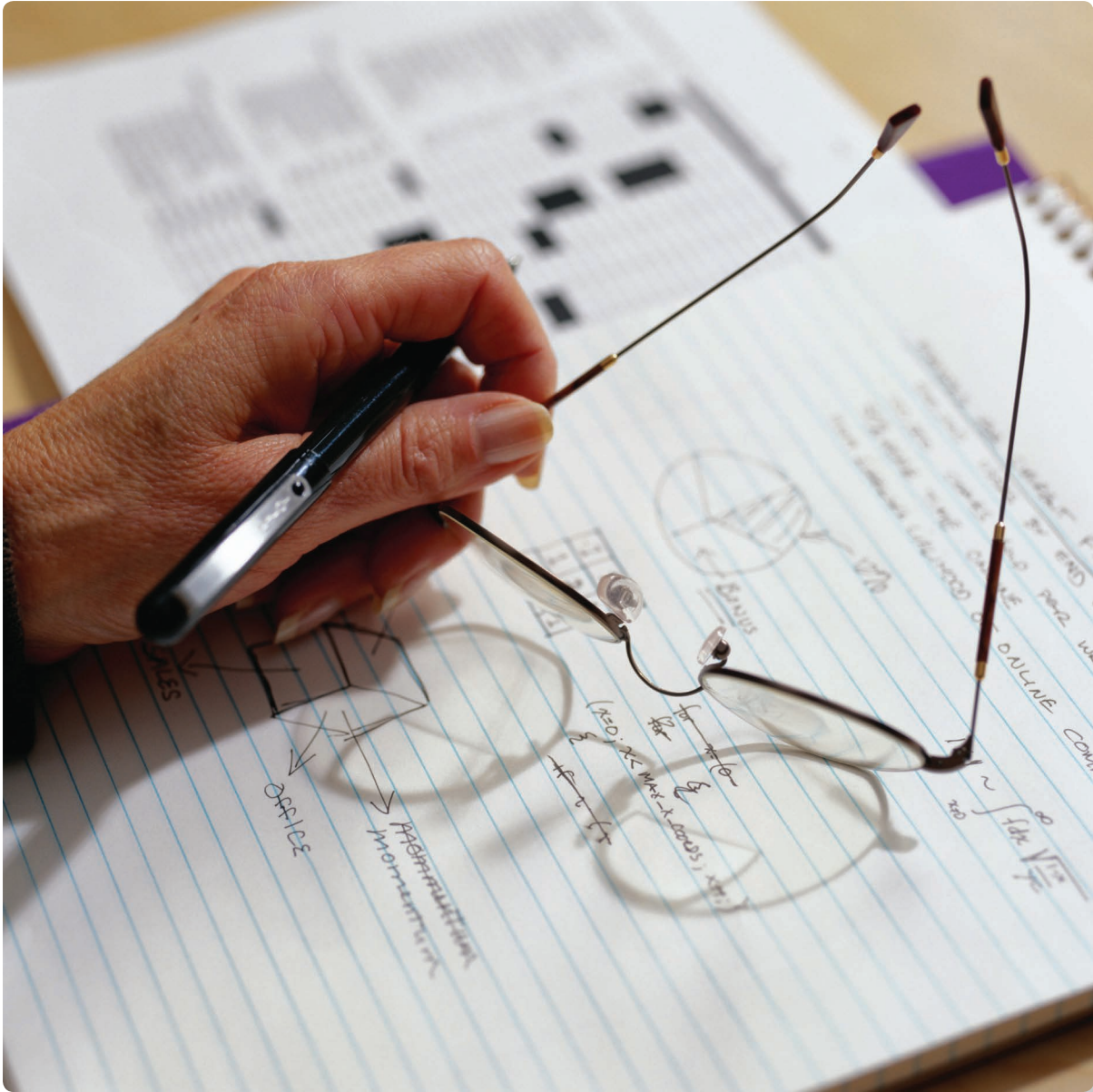


## PERFORMANCE MEASURE 2.11

### Number of Internal Audit Findings and Number of Repeat Internal Audit Findings

Chart 2.11.5: Total Internal Audit Repeat Findings MDOT-Wide FY2014-FY2018





**TANGIBLE RESULT DRIVER:**

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

**PERFORMANCE MEASURE DRIVER:**

Patrick Bradley  
*Maryland Aviation Administration  
(MAA)*

**PURPOSE OF MEASURE:**

To monitor compliance with State and organizational operating processes and procedures each year by tracking the number of Legislative Repeat Audit Findings.

**FREQUENCY:**

Annually (in January)

**DATA COLLECTION METHODOLOGY:**

Information collected from TBU audit databases.

**NATIONAL BENCHMARK:**

N/A

## PERFORMANCE MEASURE 2.12

### Number of Legislative Repeat Audit Findings

*"Fraud is a binary issue where the only good number is zero."*

— Rob Norman

Transparent, informative, and accurate financial reporting is essential for our customers to have confidence in MDOT's ability to manage resources. Legislative audits provide an external view of our current systems and areas for improvement.

The purpose of this performance measure is to track the number of Legislative Repeat Audit Findings. Data will be presented MDOT-wide in the number of legislative repeat audit findings on an annual basis. This will encourage MDOT and each TBU to avoid these findings.

Legislative Audits are performed by the Maryland Department of Legislative Services and tracked on a fiscal year basis (July of current year through June of the following year). From FY2013 through FY2017, there were six total Office of Legislative Audit (OLA) Repeat Audit Findings dealing with proper internal controls over items purchased not being maintained, access to fare collection equipment and money rooms not being controlled, access controls to critical database security logs, files and transactions lacking, a lack of controls over critical virtual servers, the process for determining the propriety of architectural and engineering contract billings not being comprehensive and a lack of internal controls to ensure independent approvals for purchasing and disbursement transactions.

Five Legislative Repeat Audit Findings occurred in FY2013-FY2017 and have been resolved.

There were zero Legislative Repeat Audit Findings in FY2016.

There was one Legislative Repeat Audit Finding in FY2017 which has been resolved.

## PERFORMANCE MEASURE 2.12

### Number of Legislative Repeat Audit Findings

Chart 2.12.1: Number of OLA Findings & Repeat Findings by TBU FY2013 – FY2017

	Fiscal Year											
	2013		2014		2015		2016		2017		Total	
TSO	4	0					3	0			7	0
SHA	10	1					2	0			12	1
MDTA			2	1					0	0	2	1
MTA					9	1					9	1
MVA			9	2							9	2
MAA	8	0							4	1	12	1
MPA					2	0					2	0
Total Findings	22		11		11		5		4		53	
Total Repeat Findings		1		3		1		0		1		6

Audit Finding

Repeat Audit Finding

## TANGIBLE RESULT DRIVER:

Corey Stottlemeyer  
*The Secretary's Office (TSO)*

## PERFORMANCE MEASURE DRIVER:

Dave Sharpless  
*Maryland Transportation Authority (MDTA)*

## PURPOSE OF MEASURE:

To monitor and ensure regularly scheduled preventive maintenance is conducted on time and in accordance with each TBU's guidelines. The intent is to reduce the percentage of vehicles which have not been maintained within prescribed time, mileage or hours requirements. MDTA also reduces the percent of vehicles reaching the critical zone for preventive maintenance.

## FREQUENCY:

Quarterly

## DATA COLLECTION METHODOLOGY:

Maximo

## NATIONAL BENCHMARK:

N/A, mix of equipment does not lend itself to one standard benchmark.

## PERFORMANCE MEASURE 2.13

### MDOT Fleet Vehicle On-Time Preventive Maintenance

*"Take care of your car in the garage, and the car will take care of you on the road." – Amit Kalantri*

The Preventive Maintenance (PM) Programs at each TBU are designed to ensure preventative maintenance is performed that will support efficient and effective vehicle/equipment service on a daily basis. Effective servicing leads to reliability, operating efficiency and optimizes the number of vehicles/equipment available to meet service demand functions/customer service throughout MDOT.

These objectives must be achieved with proper balance of vehicle/equipment preventive maintenance and fiscal constraints. It is recognized that preventive maintenance has associated costs however, vehicle/equipment resources are a significant investment and must be a protected asset.

In August 2017, the decision was made to add all TBUs to this Performance Measure and transfer it to Excellerator TR2. Both items were accomplished in September, 2017 and the new TR is now identified as Performance Measure 2.13, Use Resources Wisely, "MDOT Fleet Vehicle On-Time Preventive Maintenance." The previous measure, "Critical Zone" PM's is exclusive to MDTA and will continue to be reported individually. An initial meeting was conducted with all fleet representatives in September 2017. Reporting criteria was shared and agreed on. Each TBU discussed their ability to retrieve requested data in time for the October Excellerator meeting. Data challenges: All TBUs may not be able to retrieve a year of data since there have been recent changes in their collection systems. We will report on available data in October with a continued pursuit to collect additional/future data. Information will be supplied by month but reported as quarterly data.

MDTA was able to increase the vehicle replacement mileage from 100,000 to 150,000 through its PM program without compromise to safety and equipment availability. This extends the life of the vehicle while avoiding overall replacement costs

## PERFORMANCE MEASURE 2.13

### MDOT Fleet Vehicle On-Time Preventive Maintenance

Chart 2.13.1: MDOT On-Time Preventative Maintenance by TBU CY2018

